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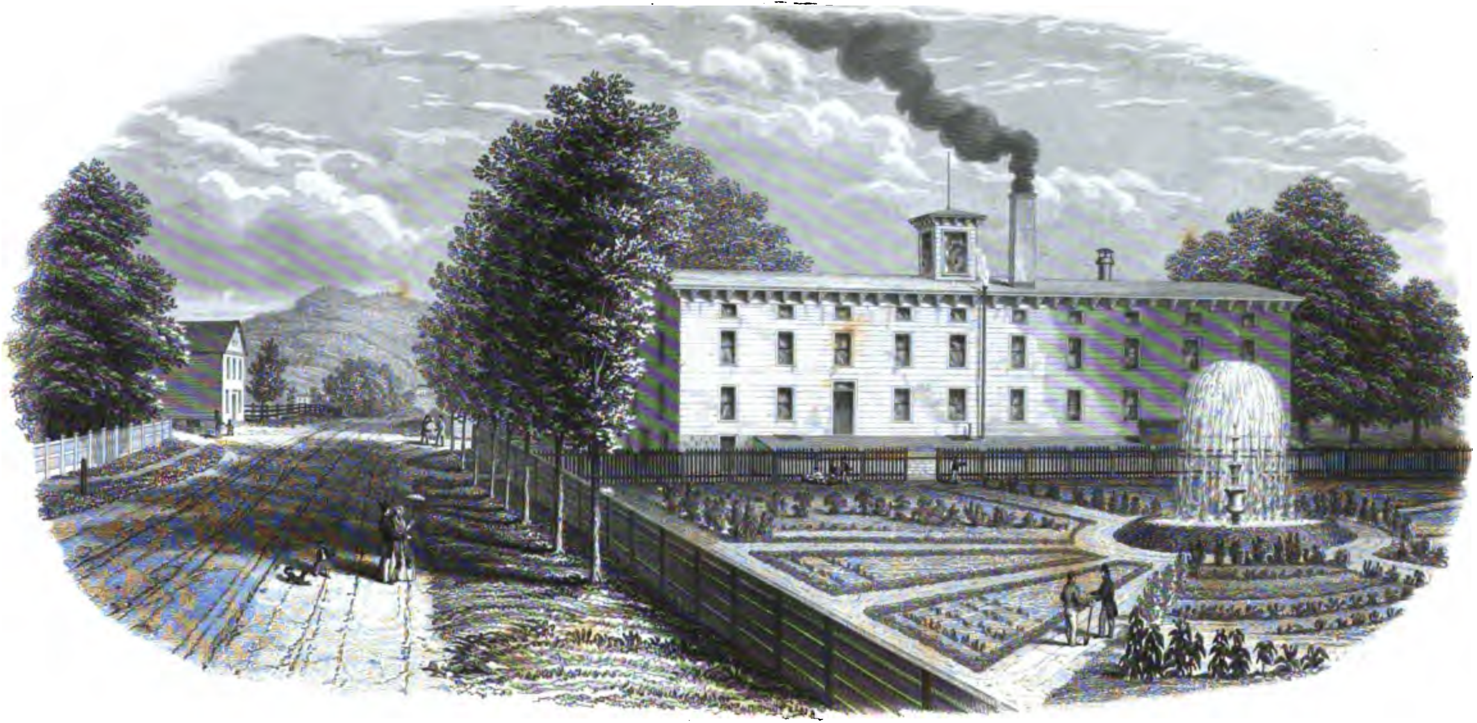

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THE

NEW-YORK JOURNAL OF MEDICINE,

AND THE

COLLATERAL SCIENCES.

EDITED BY

SAMUEL S. PURPLE, M.D.,

AND

STEPHEN SMITH, M.D.

> Verumque est, ad ipsam curandi rationem nihil plus conferre,
> quam experientiam.—CELSUS.

VOL. XII. . . . . NEW SERIES.

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TO READERS AND CORRESPONDENTS

OF THE

NEW-YORK JOURNAL OF MEDICINE.

With this number we commence the Twenty-second Volume (Twelfth of the New Series) of the New-York Journal of Medicine and the Collateral Sciences; and, in doing so, we embrace the opportunity offered of assuring our readers and contributors of the increasing prosperity of the work. In the history of medical periodical literature in this city, we doubt if an instance can be found where so much success, under so many embarrassing circumstances, has attended the development of a work. Based upon the only foundation which can here ensure success, *an unreserved and honorable independence*, its inception and growth thus far has been healthy, as is evidenced in a steadily increasing inquiry at home and abroad for the work, and a list of contributors second to no similar work published in this country. It is not for us to say whether the increasing patronage is owing to the earnest devotion of the editors and contributors to its interests, or to the peculiar advantages which it enjoys, coming as it does from the metropolis of America, or to all of these circumstances combined; but this much we can say, that the conciousness that the works meets with the approbation of those for whom it is intended, shall continue to throw around it that zeal and devotion which shall sustain, if not increase its reputation as a truthful mirror of the progress of practical medicine and surgery.

☞ Our readers will observe that we give them in this issue 158 in place of 144 pages, the stipulated number.

The following works have been received :—

Lectures on Surgical Pathology, delivered at the Royal College of Surgeons of England. By James Paget, F. R. S., lately Professor of Anatomy and Surgery to the College. London, 1853. Philadelphia: Lindsay & Blackiston, 1854, pp. 699. (From the Publishers.)

A Text Book of Anatomy, and Guide in Dissections for the Use of Students of Medicine and Dental Surgery. By Washington R. Handy, M. D., Professor of Anatomy and Physiology in the Baltimore College of Dental Surgery. etc., etc. With two hundred and sixty-four Illustrations. Philadelphia: Lindsay & Blakiston, 1854. 8vo, pp. 810. (From the Publishers.)

A Treatise on the Venereal Disease. By John Hunter, F. R. S. With copious additions, by Dr. Philip Ricord, Surgeon to the Hôpital du Midi, Paris, etc. Edited, with notes, by Freeman J. Bumstead, M. D., Physician to the Northwestern Dispensary, New-York. 8vo, pp. 520. Philadelphia: Blanchard & Lea. 1853. (From the Publishers.)

The Medical Formulary: Being a Collection of Prescriptions, &c., &c. By Benjamin Ellis, M. D., etc. Tenth Edition, revised and much enlarged. By Robert P. Thomas, M. D., Professor, &c. Philadelphia: Blanchard & Lea. 1854, 8vo, pp. 296. (From the Publishers.)

Chemistry and Metallurgy, as applied to the Study and Practice of Dental Surgery. By A. Snowden Piggot, M. D., etc. With numerous illustrations. Philadelphia: Blanchard & Lea. 1854, 8vo, pp. 516. (From the Publishers.)

An Address to the Public, in regard to the Affairs of the Medical Department of Hampden Sidney College. By Several Physicians of the City of Richmond, Va. Richmond, 1853, 8vo, pp. 59.

Valedictory Address delivered to the Graduating Class, at the 48th Commencement of the Castleton Medical College. By William Sweetser, M. D., Professor of the Theory and Practice of Medicine. Castleton, 1853, 8vo, pp. 20. (From the Author.)

The Legitimate Goal of Professional Ambition. An Address introductory to a Course of Lectures in the Medical Department of the St. Louis University. By Wm. M. McPheeters, M. D., Professor of Materia Medica and Therapeutics, delivered Oct. 31st, 1853. St. Louis, 1853, 8vo, pp. 16. (From the Author.)

Introductory Lecture, addressed to the Class of the Kentucky School of Medicine, Session of 1853-4. By H. M. Bullitt, M. D., Professor of Physiology and Pathology. Louisville, 1853, 8vo, pp. 19. (From the Author.)

The Claims of Medicine to be regarded a Science. An Introductory Lecture delivered at the opening of the Third Session of the Medical Department of the University of Nashville (21st Oct., 1853). By Paul F. Eve, M. D., Professor of Surgery. Nashville, 1853, 8vo, pp. 32. (From the Author.)

A Discourse Commemorative of the late William E. Horner, M.D., Professor of Anatomy. Delivered before the Faculty and Students of the University of Pennsylvania, October 10th, 1853. By Samuel Jackson, M.D., Professor of the Institutes of Medicine. Philadelphia: 1853, 8vo, pp. 46. (From the Author.)

☞ Communications intended for publication, and Books for Review, should be sent, *free of expense,* directed to Drs. Purple and Smith, Editors of the New-York Journal of Medicine, 183 Hudson-street, *New-York.* Persons at a distance may direct parcels, or exchanges, *(paid,)* as above, under cover, to M. J. B. Bailliere, Rue Hautefeuille, *Paris;* or H. Bailliere, 219 Regent-street, *London;* or Lindsay and Blakiston, *Philadelphia;* or Wm. B. Ticknor & Co., *Boston.* The attention of Correspondents is respectfully requested to the above, as the publishers are frequently subjected to unnecessary expense for postage and carriage.

All remittances of money and letters on the *business* of the Journal, should be directed to the proprietors.

☞ Particular attention is requested to the above, as parcels, communications and exchanges have failed to reach us, owing to inadvertence, or want of attention to these notices.

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THE NEW-YORK
JOURNAL OF MEDICINE
FOR JANUARY, 1854.

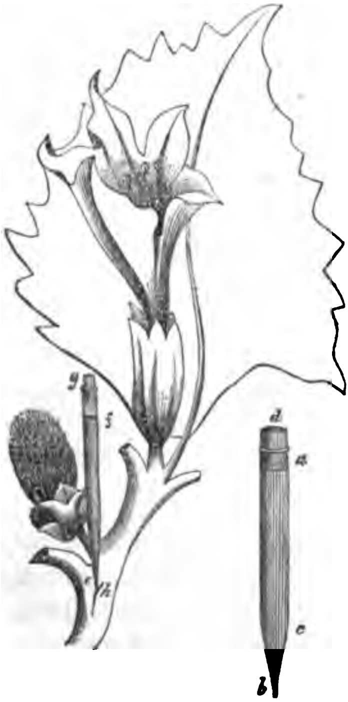
PART FIRST.

ORIGINAL COMMUNICATIONS.

Art. I.—*An Account of some Experiments and Observations on the Influence of Poisons and Medicinal Agents upon Plants.* By J. H. Salisbury, M. D., State Chemist, Albany, New-York. With an Illustration.

It is well known that different poisons act very differently upon the human body. Some act by combining directly with some of the proximate principles of the tissues, breaking up their organizations, and are hence called corrosive; others so influence the nervous system as to produce a soporific effect, and still others by decreasing vascular action, &c. The same may be said of medicinal agents. As the structure and organization of the plant is much more simple than that of the animal, it was thought that the action of poisons and medicinal agents upon living organized matter could be studied and arrived at with more precision and satisfactory accuracy when administered to the plant, than when given to the animal. With this view, a series of experiments were commenced in the early part of September, 1851.

The first consideration was to fix upon some good means of introducing poisons and medicines into the circulation of the plant gradually, with as little organic lesion as possible. For this purpose I prepared a series of small glass pipettes or tubes, of various capacities, according to the size of the plant and the concentration of the material to be introduced. The drawing in the margin (Fig. 1), represents one of these; *a*, *b*, is the pipette; *d*, a cork, inserted into the mouth; *c*, *b*, represents one end drawn out to a sharp point, leaving the orifice at *b* very small. A small puncture is now made with a small, smooth, round, sharp awl, or other instrument, in a direction downwards, making an angle with the stem of the plant of about 15°, and perforations just beneath the inner bark. As soon as the pointed instrument is withdrawn, the capillary end of the pipette is carefully and snugly inserted into the puncture, as represented in fig. 2. The pipette is now nearly filled with the poison or medicine, as the case may be, and the cork, *g*, inserted. The liquid material gradually passes from the tube into the plant. In Fig. 2, *h* represents the puncture; *e*, the capillary extremity of pipette; *f*, the height of the material; and *g*, the cork, which is fitted in to prevent evaporation.



EXPERIMENT I.—Selected a strong vigorous sunflower plant (Helianthus annuus,) four feet six inches high. Inserted into the side of the stem, about midway between its top and base, a pipette of one-eighth inch bore and two inches long. The end inserted into the plant was drawn down to the size of a small knitting-needle. This end was inserted just beneath the inner bark. The tube, after being tightly fitted into the stem, was filled with concentrated sulphuric acid. This was done *Sept. 6th*, 11 A. M. At 1 P. M.—two hours after—the leaves in the immediate vicinity of the point where the sulphuric acid was inserted began to droop. At 3 P. M., these hung down almost in a line with the plant, and others farther removed began to show signs of the influence of the poison. At 6 P. M., one leaf below the incision, and six above it, were quite wilted, and had fallen down in the direction of the stem, being no longer able to support themselves. Four or five other leaves had commenced wilting. Death had advanced farther in the stalk and petioles than in the leaf blades.

Sept. 7th, 9 A. M.—Eight leaves above the point where poison was inserted, and three below it, were quite dead at the base of their petioles, and the whole of them were hanging down beside the stem, with the leaf blades quite wilted. The stem was quite dead to the distance of eight inches below the wound and twenty-two inches above it, and bleached to a gray white, and considerably shrunken. No sour taste could be distinguished in the dead parts. The sap gave an acid reaction with test paper. Six P. M.—The death of the stem has advanced since morning up the stem about six inches. The petioles of eight leaves are entirely dead, and bleached nearly white, and the leaf blades of the same quite wilted.

Sept. 9th, 6 P. M.—Almost entirely dead above the wound, and for eight inches below it.

Sept. 11th, 9 A. M.—Entirely dead above the wound. Death has not advanced downwards any since the 7th.

EXPERIMENT II.—Lilac (Syringa vulgaris). *Sept. 6th*, 11 A. M.—A branch of this plant, one inch in diameter, was supplied with a tube or pipette in the same manner as the sunflower. The branch was about four feet long, several years of age, and very firm in texture. The pipette was filled with nitrate of silver. The solution was made with forty grains of the salt to an ounce of water.

Sept. 7th, 9 A. M.—No change. Six P. M.—No change. The leaves nearest the puncture were from two to three inches off.

Sept. 9th, 6 P. M.—Leaves quite wilted, twelve inches above the wound. Above this they are less, yet considerably affected.

Sept. 11th, 9 A. M.—Death advancing up the stem gradually. The whole limb is affected. The lower leaves are quite dead.

Sept. 14th.—The whole limb quite dead.

EXPERIMENT III.—*Sept. 6th*, 9 A. M.—Another branch of the lilac (Syringa vulgaris) on the same plant was supplied with a tube filled with a solution of corrosive sublimate, 10 grains to the ounce of water. The branch was of this year's growth, about 3 feet long and ⅓ inch in diameter. A pipette was inserted at its base.

Sept. 7th, 9 A. M.—The leaves just above, and nearest where the poison was inserted, had begun to wither and fall down beside the stem. The leaves affected at about 6 inches removed from where the poison was inserted. 6 P. M.—Two more leaves began to wilt since morning.

Sept. 9th, 6 P. M.—Four of the leaves nearest the wound are quite wilted; the adjacent ones are also slightly affected.

Sept. 11th, 9 A. M.—Death slowly but steadily advancing.

Sept. 12th.—Leaves all wilted.

Sept. 13th.—Branch quite dead.

EXPERIMENT IV.—Horse-chestnut (Æsculus hippocastanum). *Sept. 6th*, 11 A. M.—Inserted a pipette into a limb of a horse-chestnut tree, four feet from its extremity. Branch densely covered with large leaves and green fruit. Placed in the pipette 30 drops of a strong tincture of *iodine*.

Sept. 7th, 11 A. M.—No perceptible change in the appearance of the branch.

Sept. 8th, 9 A. M.—Slight signs of withering at the apex of the leaves on the farthest extremity of the branch.

Sept. 9th, 9 A. M.—Four of the leaves at the extremity of the branch considerably withered.

Sept. 10th, 9 A. M.—Five leaves at the extremity of branch nearly dead.

Sept. 11th, 9 A. M.—Five of the leaves at the extremity of the branch dead, and three more quite withered. Death advancing slowly towards the point where the iodine was inserted.

Sept. 12th, 9 A. M.—Appearance the same as on the 11th.

Sept. 13th, 9 A. M.—No further change, save that the leaves of the branch appear more fresh.

Sept. 14th, 9 A. M.—Branch appears to be recovering from the effects of the iodine. Leaves more healthy in appearance than on the 13th.

Sept. 20th, 9 A. M.—Branch quite recovered, where the leaves are not already dead.

EXPERIMENT V.—Stramonium (Datura stramonium). *Sept. 6th,* 12 M.—Inserted a pipette into a fine thrifty stramonium plant, near the base of a flower, as seen in Fig. 2. Placed in pipette a solution of sulphate of zinc, 60 grains to the ounce of water. Placed in tube 40 drops.

Sept. 7th, 9 A. M.—No perceptible change in the appearance of the plant. All the solution absorbed by the plant. Filled the tube a second time.

Sept. 8th, 9 A. M.—Slight appearance of wilting in the leaf next above the wound.

Sept. 9th, 9 A. M.—One leaf quite dead, and 3 others next above partially withered. 6 P. M.—Influence of medicine gradually advancing upwards. One more leaf and a flower affected.

Sept. 10th, 10 A. M.—The whole plant above wound quite sickly in appearance. Five leaves and one flower next above the wound dead.

Sept. 12*th*, 10 A. M.—The whole plant above the wound dead. Plant quite healthy below the wound.

Sept. 18*th*, 12 M.—Appearance of the plant about the same as on the 12th.

EXPERIMENT VI.—*Castor-oil plant* (Ricinus communis). *Sept.* 7*th*, 9 A. M.—Selected four strong, healthy castor-oil plants, about four feet high. Into one was inserted a pipette, and into this 12 drops of creosote.

Sept. 8*th*, 9 A. M.—The leaf next the insertion of the creosote was quite withered and hung down beside the stem. The death was more perfect about the wound, and at the base of the petiole, than in the leaf blade. 6 P. M.—Four leaves were withered and two were hanging down beside the stem of the plant. The death commenced at the point where the creosote was inserted, and it gradually advanced up and down the stalk from that point with about equal rapidity.

Sept. 10*th*, 6 P. M.—All but the top leaves of the plant are either entirely dead or somewhat wilted. Three of the top leaves are yet unaffected.

Sept. 12*th*, 9 A. M.—Only one leaf on the plant unaffected.

Sept. 14*th*, 9 A. M.—Whole plant affected, nearly dead.

Sept. 18*th*, 9 A. M.—Plant dead.

EXPERIMENT VII.—*Sept.* 7*th*, 9 A. M.—Into another castor-oil plant was placed a pipette, and into this pipette 30 drops of oil of savin.

Sept. 8*th*, 9 A. M.—The leaf next above the point of insertion was quite dead, and had fallen down beside the stem. 6 P. M.—Death gradually advancing, both above and below the wound. Three leaves since morning have wilted and fallen down beside the stem.

Sept. 9*th*, 9 A. M.—The whole plant is wilting. Every leaf on the plant is affected.

Sept. 11*th*, 9 A. M.—Plant dead.

EXPERIMENT VIII.—*Sept.* 8*th*, 9 A. M.—Into another castor-oil plant a pipette was inserted, and into this 30 drops of oil of tansy.

Sept. 9th, 9 A. M.—The leaf next above where the tansy was inserted, was quite wilted and hung down beside the stem. 6 P. M.—Death gradually advancing, both above and below the wound. Three new leaves have withered since morning.

Sept. 10th, 9 A. M.—The whole plant is affected. Every leaf is more or less withered. Those nearest the wound are entirely dead.

Sept. 12th, 9 A. M.—Whole plant dead.

Experiment IX. *Sept. 8th*, 9 A. M.—Into the fourth castor-oil plant a tube was inserted, and into this 15 drops of nitric acid.

Sept. 9th, 9 A. M.—The leaf next above the wound was quite withered, and hung down beside the stem, it being no longer able to support its own weight. Juice of wilted petiole gave an acid reaction with test paper. 6 P. M.—Death gradually advancing both above and below the wound. Three new leaves withered since morning.

Sept. 10th, 9 A. M.—The whole plant is affected, but to a less degree than those treated with oils of savin and tansy, and to a greater degree than that into which was transmitted creosote.

Sept. 12th, 9 A. M.—Plant nearly dead.

Sept. 14th, 9 A. M.—Plant entirely dead.

In all four of the castor-oil plants, the tubes were inserted about two feet from the base. The death, after the first few hours, in all the plants, proceeded faster above the wounds than below them.

Art. II.—*Practical Observations on Tracheotomy, as a Remedy in Croup.* By J. P. Batchelder, M. D., New-York.

I believe the subject of tracheotomy as a remedy in croup, although one of great importance to every member of the medical profession, and of surpassing interest to many out of it, has not been much discussed in any of our periodicals.

Although the operation has been introduced and performed by some members of the faculty, there are others who doubt, and others still who deny, its propriety or utility, from which it may be inferred that the principles, on which its performance or non-performance in cases of croup depend, have not yet been fully ascertained and settled. With the hope and intent of exciting discussion and eliciting information concerning what may yet be considered a problem in the science of medicine and the art of healing, I submit the following observations on tracheotomy, as a remedy or means of saving life in croup, for publication.

It would seem that the two great problems relating to this matter to be solved are:

1. The propriety of the operation of tracheotomy as a remedy or means of saving life in croup.

2. The pathological conditions and state of the patient, which on general principles warrant or forbid its performance in each particular case.

First. The propriety of the operation of tracheotomy, as a remedy or means of saving life in croup, must depend on its adaptedness to accomplish certain purposes or objects, the chief of which are:—1. To give greater freedom of ingress and egress of air to and from the lungs. 2. To effect the removal of bodies, which, acting as extraneous substances in the trachea or bronchial tubes, endanger life, or may ultimately destroy it. 3. To afford rest or comparative remission of effort to organs laboring under inflammatory action. 4. To facilitate the application of suitable remedies to the seat of the disease.

Related to these points are two others which will be adverted to as we proceed. Does croup indeed present the contingencies which give rise to these objects,—either or all? If so, is tracheotomy suited and competent to meet and obviate them; or, in other words, is it a proper remedy or means of saving life in that disease?

Now, croup is an inflammation of the trachea, involving all its tissues and structures, rendering them less movable among themselves, and more contracted than in health; hence the calibre of this tube is actually smaller when affected with this disease than in health, and is still further diminished by the transudation of fibrine, which, deprived of its moisture by the passage of air and temperature of the part, is converted into a tolerably firm, but slightly adherent membrane.

This inflammation is not always confined to the windpipe, but often extends up to the larynx, involving its tissues and structures, muscles and ligaments, which, like muscles and ligaments in other parts when inflamed, become rigid and contracted, and subsequently impede the movements of the laryngial cartilages and narrow the rima glottidis; it also sometimes descends below the bifurcation, involving the bronchi to a greater or less extent. Strictly speaking, these extensions are to be regarded chiefly as complications only. The diminished diameter of the trachea,—the fixedness of its constituent parts, and consequent undilatability,—the adventitious membrane,—the extension of the inflammation upward to the larynx, involving all its structures and tissues,—the spasmodically contracted and nearly closed glottis, necessarily and most unequivocally interfere with the ingress and egress of air, and produce the condition which imperiously demands the operation. It should also be remembered that this occurs in the early stage of the disease, and therefore indicates not only the propriety and necessity of the operation, but its early performance, when it can answer, and is most certain to answer, the indications requiring it, than it is after those accidents have occurred which are so sure to follow, and which render the result more doubtful. Sometimes, a little later in the disease, the lower part of the false membrane within the trachea, loosened and detached, doubled and folded upward, obstructs the passage of air and destroys the patient, unless saved by an operation.

When the inflammation travels downward below the bifurcation of the trachea, and much beyond into the bronchi, the false membrane is occasionally found entire, oftener in fragments; but more generally the morbid product is not membrane, but an albuminous exudation, mingled with mucus or pus, and more or less fluid, which is seldom discharged, like other sputa, through the rima glottidis. This false membrane, mucus, or muco-purulent matter, in the trachea or bronchi, must be regarded as an extraneous substance, which prevents the ingress and egress of air, or hinders its acting upon the lungs, or the lungs upon it; and, consequently, interfering essentially with respiration. These matters can, for reasons which will presently appear, very rarely pass through the glottis, and without their discharge the patient will die; through an artificial opening, however, they will more readily and certainly find an exit.

Having considered the structural and physical changes which take place in the parts affected, and also in the products of the disease, and their relations to the propriety of the operation, we shall now proceed to examine certain modifications of function, which have a similar relation to, and bearing upon that question,—premising that they are based on two principles, essential to the economy of the system, viz:—The relation which obtains between a hollow viscus and its outlet; and the conservative tendency of the sensibility, appropriate and peculiar to every organ and every tissue in the body. In respect to the first, the relation between the viscus and its outlet, it is proper to remark that the bronchial system is to be regarded as a hollow viscus, and the glottis as its outlet, and both subject to the same laws of feeling and action as are other analogous organs and their outlets. For example, if the bladder be irritated, pain is felt at the glans penis; if the stomach be disturbed, uneasy sensations are experienced in the fauces; if the gall-bladder be affected, great distress is felt at its termination in the duodenum; if the bronchi be aggrieved, a peculiar sensation as of an extraneous body is perceived at the back part of the larynx or glottis, for the removal of which coughing is instituted.*

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*Subject to an irritable glottis, and often experiencing this sensation, I became

The physical cause of this sensation need not come in contact with the spot where the sensation is experienced. An extraneous body, or an inflammation anywhere in the bronchial system, particularly within the trachea, which lessens the capacity of those tubes, induces simultaneously the sensation and the closure, complete or partial, of the glottis, that an increased impetus may be given to the volume of air expelled by coughing. This closure of the glottis may prevent the escape of the foreign body, and likewise the admission of air, while an artificial opening surrounded by no muscles allows both.

The principle on which the phenomena above mentioned depend is the consent of action or sympathy of feeling which exists between the organ and its outlet. If motion be the function concerned, the outlet relaxes when the organ contracts moderately, but holds tight when it (the organ) acts violently. If sensation be the function especially concerned,

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curious to learn its cause and precise location, and accordingly addressed myself to the investigation. Reflecting that the application of an extraneous substance to the rima glottidis is the most simple, palpable, and certain physical cause of coughing, the object of which is to drive away the offending substance by forcibly impelling against it a volume of air; that the contact of this body must induce a change in the condition and action of the capillaries of the part touched, and that the perception of this change constitutes the sensation which advertised the necessity for a current of air to force that body away; that, as coughing frequently occurred in the absence of this, its true physical cause, whose presence was not therefore at all necessary to the production of the sensation or cough; that both were caused by whatever affected the passage of air through the bronchi (whether external pressure or internal irritation) by lessening their diameter, and, of course, retarding the passage of air through them; and recollecting a case in which an indomitable cough was excited by a tumor which distorted or deflected the trachea,—it was inferred that pressure on the trachea, if sufficiently strong to affect its calibre, would, as well as irritation of any other kind, induce the sensation and the cough. Reasoning from analogy, the inference was apparent, that, in a state of health or freedom from other causes of irritation, this expedient might be resorted to as a means of settling this question, and it was so employed with entire success; for it enabled the experimenter in his own person to excite, whenever he pleased, the sensation and the cough, and by repeated trials to locate the former in the posterior part of the larynx, and infer that it was owing to the action of the small muscles situated in the vicinity of the arytenoid cartilages.

and the action of the organ vehement, pain will be felt at the termination of its outlet; but, however violent the action of the bronchial system, there is neither pain nor inordinate resistance, when an artificial opening has been substituted for the glottis, which is another reason indicating the propriety of the operation.

The second principle to which we have alluded is, that the sensibility of an outlet, like that of every organ, tissue, and structure, has a special reference to the conservation of the part over whose welfare it is destined to watch, and therefore it takes cognizance of, and alarm at, the presence of such agents as are likely to injure its structure or disturb its normal action. For instance, if an extraneous body, the cause most apt to injure the glottis, come in contact with it, whether from without or within, nature, not knowing whether it will or will not pass, or what harm it may do, instinctively closes the rima to prevent its entrance. This closure of the glottis is effected by the contraction of the muscles about that aperture, which contraction and consequent closure, on the approach or contact of an extraneous body within the trachea, prevents its escape.

Now, if this extraneous body, as in a case of croup, be a portion of the false membrane, mucus, or muco-purulent matter, abnormal in quantity or quality, the consequence will be the same; the rima will close, and the matter cannot pass, —consequently the patient will die, unless an opening is made, through which, unaffected by muscular action or the conservative principle, these matters may be discharged.

This spasmodic contraction of the muscles about the glottis, like all other inordinate muscular contraction, may be and generally is followed by a spontaneous relaxation proportionate to the previous contraction; hence the remissions which so frequently occur in cases of croup, and also in those from the lodgment of extraneous bodies in the air-passages. These remissions, flattering to friends, and sometimes to the medical attendant, are, nevertheless, deceptive; for although the glottidean muscles have relaxed, and the rima becomes patulous, the instant the extraneous matters or body come in contact with this fissure, it closes and prevents their passage; but the artificial opening, subject to no such contingencies, allows them an exit.

To recapitulate: the contracted condition of the tracheal tube and further diminution of its cavity by the adventitious membrane, the partial, sometimes complete closure of the glottis by actual invasion of the disease, by spasm or the entanglement of detached membrane, preventing in a greater or less degree, the ingress and egress of air to and from the lungs, constitute the *first* contingency which invokes the aid of surgery; the transuded fibrine and the secreted mucus, or muco-purulent matter, which act as extraneous substances in the bronchial tubes, the *second;* the repose or remission of action of the organs involved, the *third;* the easy application of remedies to the seat of the disease, the *fourth;* these, with the modifications of function, proceeding from the relation which obtains between a viscus and its outlet, and also from the conservative principle with which every organ and part are endowed, comprise the several causes of danger presented by croup, and which require the operation of tracheotomy. For the passage of air, the discharge of extraneous matter, the repose of the organs and the application of suitable remedies, a sufficient opening is required, because that made by nature, the glottis, is not adequate. If the passage from the bladder, the uterus, or the rectum be materially obstructed, the surgeon, in order to save life, or to afford temporary or permanent relief, does not hesitate to make an opening, which may serve as a substitute for the natural outlet; and if the bronchial system be one of the hollow viscera, with an outlet subject to the same laws of action and feeling, does not analogy and common sense dictate, and experience and science sanction the dictum, that under similar circumstances a similar mode of treatment should be adopted and pursued? Is not, then, an operation which makes an opening into the larynx or trachea adapted to the nature and necessity of the case, and therefore an appropriate remedy in this disease? The foregoing considerations and reasons seem to us to solve the first problem, and justify an affirmative answer.

Having contemplated the objects of the operation in the abstract, and traced out the contingencies and accidents which have a bearing upon its propriety and adaptation to the accomplishment of those objects, we proceed to consider the second problem, viz., the pathological condition and state of the patient, which, on general principles, warrant or forbid its performance in each individual case.

Although we have spoken of tracheotomy as a remedy in croup, yet we are well aware that it is to be regarded more as a preventive of death than as a curative of disease, and with this view, we believe, the surgeon generally proceeds to its performance. To understand, then, fully the principles which warrant or forbid its performance in particular cases, involves a knowledge of the manner of dying it is designed to prevent; which, we opine, is death by apnœa.

Now, death by apnœa is death by privation of breath; or, as one author has it, "death by privation of air inhaled or expelled in respiration," and is produced in croup, as in all other cases, by the non-admission of a sufficient quantity of respirable air for the ventilation of the blood; and, *e converso*, by the retention of that which is no longer fit for respiration, and consequently poisonous to the system.

From what has been stated, it will appear that both these contingencies, which, in fact, amount to the same thing, may arise in this disease from mechanical obstruction. When induced by this cause, inspiration first and principally suffers, while expiration is less materially affected; hence, the evils from mechanical obstruction obtain primarily, i. e., in the first or early stages of the disease, and those from vitiated air, which poison the system, prevail in the subsequent or later periods, and may be regarded as the direct consequence of the former. To prevent both, and particularly the latter, we recommend a timely opening into the larynx or trachea; and it is difficult to conceive why it should not succeed in a majority of cases.

Although these contingencies appear really and truly to warrant the operation, yet there seems to be something so repulsive in the very idea of attacking the throat of an infant, or child, knife in hand, that parents, friends, and bystanders all shudder at the very proposition; and the surgeon himself, though inured to scenes of blood, recoils from the deed. The operation is therefore delayed, perhaps not performed at all, or only when all other means have failed, and will itself most likely prove unsuccessful, not from any fault which attaches to it, but from having been put in requisition as a "dernier ressort," and at a time when a hope of success could not be reasonably entertained. Even if performed under these circumstances, a consolation is to be derived from the fact, that if it has not saved, it has not shortened life; and I will add that, in every instance within my own observation or knowledge, it has considerably mitigated the sufferings of the little patient; so much so, that no one has regretted its performance. And furthermore, that sometimes it seemed to prolong life, and strengthen the hope that it would be ultimately successful; a hope which has been too often sadly disappointed. If, in these cases, the operation had been earlier performed, a different result might have been obtained; for, besides the rest, and consequent mitigation of the symptoms, time would have been given for the use of remedies, by which the disease might have been cured.

From this digression, let us return to the consideration of the phenomena which not only attend death by apnœa, but augur its approach, and show forth the conditions and pathological changes which have an important bearing upon this part of the subject. These are a turgescence of the veins of the head and neck, change of color in the face, particularly the lips; also in the hands and nails; the faltering pulse, the failing action of the heart, and laborious breathing. Beyond these phenomena, indicative of impeded circulation in the lungs, the surgeon should, however, look for those physical and pathological changes which more particularly authorize or peremptorily forbid the operation; changes dependent on the movement of the blood, whose circulation is essential to the continuance of life. Now the fact has been fully established by modern pathologists, that, in death by apnœa, the stagnation of the blood commences in the capillaries of the lungs; that there its circulation ceases, and there death begins.

In each particular case of croup in which this operation is meditated, we should therefore strictly inquire into the state and condition of those organs which tend to interrupt the circulation of the blood, taking care to keep in mind the fact that the function, proper and peculiar to them, is subservient to that of circulation. Has, then, the disease caused hepatization of the lungs, or an infiltration of serum into the interstitial cells, or extended into the bronchial vessels so far as to interfere with respiration, and of course with the capillary circulation? Are those minute bronchial tubes, and the air-cells to which they lead, loaded with matters which act as extraneous bodies, and which prevent the due aëration of the blood, or retard its movements? Lastly, is there still remaining strength sufficient for their expulsion and continuance of the circulation, provided an adequate opening was made? If the nervous and vital energies, on which circulation and respiration depend, be irretrievably gone,—if the state of the lungs disqualify them for respiration,—tracheotomy is certainly forbidden: but so long as the motions of the heart are carried on with vigor, and the respiratory movements also are accompanied with the manifestations of strength, they furnish evidence that sufficient recuperative power remains to warrant the performance of the operation; but when the heart begins to flag, the pulse to falter, and the respiratory movements become less vigorous, there is reason to apprehend a diminution of the powers of life, which will render the success of the operation doubtful; and if, coincident with these, are convulsions, diminution or loss of con sciousness and other phenomena, which we have particularized in a former part of this paper, the case is apparently, perhaps, not quite hopeless. It is, however, possible that, even under such circumstances, the operation, although a "dernier ressort," a "forlorn hope," may save the patient; and when friends, after a full and candid explanation, desire it, the surgeon may not, in hardly any case, withhold it.

I am fully aware that the foregoing views seem to clash with those entertained by celebrated practitioners of medicine and surgery in this and other countries, and also with those promulgated by some of our most esteemed writers; but it is not our purpose to wager battle with them on the old battle-ground, or "try conclusions" with them on their own principles; but, in a measure, to make a new issue, viz., the propriety of the operation, performed in good season.

Some of the opinions advanced by authors, we propose briefly to examine in reference to this point, particularly those of Dr. Watson, which, it is believed, have had quite as much, perhaps more influence, in swaying the judgment of medical men in this country against the performance of tracheotomy in croup, than those of any other writer.

The following is his language: "When signs of approaching death have come on—lividity of the lips, coldness of the skin and a tendency to stupor, the question *will* obtrude itself whether there may not still be a chance of saving the patient by performing tracheotomy." "The existence of this preternatural membrane and its extension so far down that air would not be admitted into the lungs even when the incision into the windpipe was made at the lowest possible point." "Another consideration forbidding much hope from this expedient at any part of the disease, is, that the ramifications of the bronchi and the ultimate air-cells get filled with serous, mucous or puriform matter, or even sometimes with a membranous exudation, whereby suffocation is effected *in the lungs themselves.*" "The membrane in the trachea," he continues, "being tubular, does not entirely exclude the air from those organs; but it does not admit it in sufficient quantity, are all but insurmountable objections to the operation." These "objections" may all be answered, in the main, by simply stating that the operation, as contemplated by this distinguished writer, comes in too late for any hopeful result; for he says: "When signs of approaching death have come on—lividity of the lips, coldness of the skin, and a tendency to stupor—the question *will* obtrude itself, whether there may not still be a chance of saving the patient by performing tracheotomy." Now our doctrine is that the operation should have been performed long before "signs of approaching death" had caused "the question to obtrude itself," and long before the system had become poisoned and its recuperative powers lost or very much impaired.

But perhaps it will be deemed more respectful and candid to consider these "objections" *seriatim;* and, 1. "The existence of the preternatural membrane, its extension," &c. The formation and extension of this membrane and the attendant circumstances do, in our opinion, call for the operation, for the purpose of detaching and removing it as an extraneous substance, which could not, for obvious reasons, have been accomplished through the rima glottidis, and also for the admission of more air, and for the direct application of suitable remedies, as the solution of the nitrate of silver, which certainly has a powerful influence in preventing or detaching these exudations.

2. "The ramifications of the bronchi and the ultimate air-cells get filled with serous, mucous, or puriform matter," &c. This objection, we think, has been already answered.

3. "The membrane in the trachea, being tubular, does not entirely exclude the air, but does not admit it in sufficient quantity." This condition we admit, but beg leave to suggest that air passes into the trachea through the rima glottidis only, which is more or less affected by spasm, or involved in the disease itself; therefore, the quantity admitted is insufficient to sustain life. If, under such circumstances, an artificial opening be made, which is not subject to any of the contingencies mentioned, more air will certainly be admitted

and find its way into the trachea and bronchi through the two openings than through the glottis only, which is narrowed by the causes alluded to. Is not the chance of life, then, doubled by the operation? To all of Dr. Watson's objections, we repeat, that the *early* performance of the operation is the answer. It is, in fine, to be regarded as anticipating or obviating them, or the conditions on which they depend. In candor to Dr. Watson, we ought to add, that in his view there are "just two predicaments in which there is a chance that tracheotomy may be useful. That they are perhaps rare, yet they have been noticed by several observers. The one is where the preternatural membrane extends but a very little way down the trachea, and is chiefly confined to the larynx; and the other is where there is no preternatural membrane at all, or only a slight coating in some part of the trachea, the impediment to the breathing having arisen mainly from a thickening of the mucous membrane." "Unfortunately, we cannot tell, before death," whether these "predicaments" exist or not.

The author of the article on croup, in the Library of Practical Medicine, tells us that—"it is not necessary to discuss the question of the propriety of resorting to tracheotomy in croup, as it has been decidedly negatived by Dr. Cheyne, Mr. Porter, and other best authorities." A very summary way this of disposing of such an important topic, especially in an elementary and standard work, and at a time when the spirit of investigation is reëxamining everything. "There does not seem," says Dr. Copland, "to be a chance of success from this operation (tracheotomy), in any case wherein the treatment developed above has failed"; and Dr. Elliotson says that "bronchotomy can only be a temporary measure." These opinions must pass for what they are worth.

Having considered at length the various matters which relate to the expediency and propriety of performing an operation for the relief of persons affected with croup, and the circumstances under which it should be performed, the next subject of legitimate inquiry, challenging our attention, would seem to be—what kind of operative procedure is best adapted to the exigencies of the case?

In accordance with the usages of surgery, the foregoing remarks have been chiefly confined to tracheotomy, but they are, nevertheless, equally applicable to laryngotomy, which we deem the preferable operation, although not so regarded by the profession. To us it has always seemed that the superiority of the latter over the former has been strangely overlooked.

The reasons, why we have always preferred laryngotomy are—1. Because making an opening into the larynx through the crico-thyroid space is easily and safely done; and, in an emergency, by almost any intelligent practitioner. 2. Because, with certain modifications, it is fully competent to answer every purpose.

Should this simple opening not meet all the exigencies of the case, it may be made to occupy the whole crico-thyroidean space (which, according to Velpeau, is about five-twelfths of an inch in the transverse, and a little less in the longitudinal direction, but, according to our admeasurement, considerably larger), or be still further enlarged, with perfect safety, so as to extend laterally three-eighths of an inch from the median line on each side; the thyroid cartilage also may be slit up nearly half an inch, and the corners clipped off, without injury to the *cordæ vocales* or any other part of importance.*

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* For the removal of extraneous matters, in young subjects, besides freely opening the crico-thyroid space, I have in several instances slit the thyroid cartilage a little way upward, and also divided the cricoid cartilage and two or three of the uppermost rings of the trachea downward, with complete success. In some of the cases, the isthmus of the thyroid gland must have been freely trenched on, and I doubt not entirely divided, with no alarming hemorrhage, the vessels in this part being, in young children, so small, that little or no danger of hemorrhage is to be apprehended, especially if the incision be made in the median line. Indeed, there is in such subjects less risk of dangerous bleeding from wounding this part than is generally supposed. If, however, the blood should flow rather profusely, it is soon checked by raising the patient to a sitting posture; and if the opening into the larynx or trachea has been injudiciously made before the bleeding has ceased, he should be bent forward; for gravitation, co-operating with this position, tends to check the flow of blood, and prevent its being drawn into the trachea.

From the accompanying diagrams and anatomical specimens, it will be clear that an opening, made by enlarging the crico-thyroid space laterally, and upward, partly through the thyroid cartilage, and cutting off the angles as recommended, will be as large or larger than the rima glottidis, and therefore give passage to as much air as in health,* or exit to an extraneous body as large as would, under ordinary circumstances, make its way through the glottis.

We are aware that the sides of the rima glottidis are formed of elastic ligaments (the cordæ vocales), and that a foreign body, larger than the apparent size of the glottis, may be, and sometimes is, actually forced through it into the trachea, and that a still larger opening than the one just described may be necessary for its removal; to accomplish which, or any other purpose, the cricoid cartilage itself may be divided in front, and three-sixteenths, or indeed a quarter of an inch, on each each side, clipped off and removed. An aperture as large or larger than the calibre of the windpipe is thus made, which will certainly afford ingress to any required quantity of air, and egress to any foreign body which can have found its way into that tube; and in cases of croup facilitate the removal of the adventitious membrane, or the application of remedies to the seat of disease within the organ.

What more, it may be asked, is required of any operation? Is tracheotomy more competent to answer the purposes in view? But some are probably thinking that our operation will not meet the exigencies of a case in which it may be necessary to insert a tube whose presence in the larynx will not be tolerated. We propose briefly to show how this inconvenience is occasioned, and how it may be obviated.

First, Why is a tube introduced into the larynx through the crico-thyroid space not tolerated?

Because, when thus inserted, its upper and back part (the angle or curved portion) is so elevated as to impinge against the point at the posterior part of the glottis, to which we have alluded, as the seat of the sensation excited by the presence of an extraneous body,* which sensation occasions coughing and other expulsatory efforts for the removal of the offending cause, whether it be diseased action or really an extraneous body. Now, if a portion of the cricoid cartilage in front, and, if need be, a portion of the uppermost ring of the trachea (the anterior face of which is much broader than the posterior), be removed, the tube, when inserted, will fall below the aforementioned spot, and be borne quite as well as if it had been lodged in the trachea. But why insert a tube at all, and for what purpose? The object, undoubtedly, is to secure or keep open a passage, through which respiration can be carried on, which, we believe, is accomplished by our operation without the tube.

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* We have examined the diagrams and anatomical specimens alluded to in the above sentence, and find them fully verifying the statement which it contains.—EDS.

The cricoid cartilage, as its name imports, is a complete ring, with a signet or seal at its posterior part, which renders that much the thickest and strongest portion of the circle; thicker and stronger behind than in front, and imbued with an elasticity which resists the inward tendency of the lateral parts, and keeps their divided extremities asunder, thus preventing the closure of the opening made by the surgeon, and rendering it sufficiently free for all temporary purposes—superseding the necessity for the tube.

But how stands tracheotomy in relation to this particular? The deficiency in the rings at the posterior part of the trachea, occupying one-third of its circumference, is filled with elastic membrane, and a layer of muscular fibres, which run transversely from side to side across this deficiency; these, connecting and acting on all the rings, with the elastic fibrous tissue which commingles with the constituents of this cylinder, give its sides a tendency to approach each other, which is resisted by the integrity of the rings; but when these are divided in front and this integrity destroyed, as in tracheotomy, the parts imbued with elasticity bring the cut surfaces together and close the opening, unless prevented by the insertion of a tube or some other mechanical contrivance. Concerning the operation we propose (for legitimate surgery bases every operation on the anatomical structure of the part —the field of its execution), ask the anatomist, and he will tell you, in addition to the reasons urged in its favor, that there is no depth of soft parts to be cut through; no danger of wounding either anomalous arteries, or arteries in their place;* no danger of bleeding from wounding the thyroid body, for it need not be touched; no danger of blood getting into the larynx or trachea, for little need be shed (besides the operation should be performed in such season that, in case of hemorrhage, the surgeon may wait a little until it ceases before he opens into the larynx, without periling the life of his patient); but he will tell you that all these difficulties and dangers are incurred when tracheotomy is attempted. Anatomy has indeed settled this question; but surgery has gone on performing an operation against which so much may be urged, and in favor of which so very little can be said.

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* See note on page 18.

When an operation is proposed in croup, the debilitated state of the patient may be such as to require the utmost caution in regard to hemorrhage. In laryngotomy there need be but little loss of blood, a consideration of vast importance in cases of exhaustion. In tracheotomy a considerable quantity is almost necessarily lost,—a quantity which of itself alone may, and I doubt not has, often turned the scale against an enfeebled patient,—a quantity which no physician would run the risk of taking, even in the gentlest manner; and should the surgeon who performs tracheotomy, and not only subjects

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* The anatomist may indeed tell you that there is a small artery, the inferior laryngeal, which crosses the crico-thyroidean space near the lower border of the thyroid cartilage, which can generally be pushed out of the way of the knife, or seized with the forceps and torn asunder, and the lacerated extremities turned aside laterally, which, in ninety-nine cases in the hundred, will stop the flow of blood.

[illegible] the loss of blood, but inflicts upon him the [illegible]ence of a severe operation, stand reproachless? [illegible] patient be expected to survive the loss of blood and [illegible]iction too, when either may destroy him? This, I [illegible] explains the reason why so few have survived, and why so many medical men doubt the utility of surgical interference. Probably the delay to the last extremity should come in for a part of the odium.

In croup, there is an adventitious membrane, forming a tube within the trachea, which of itself is sufficient to destroy life; but this is not enough: tracheotomy is performed, and another tube, much worse every way than the one formed by the disease, is introduced; a tube which prevents the application of remedies to the inside of the windwipe, and also the removal of the false membrane, or other matters, except such as can flow through it; a tube, the blocking up of which has caused, and may again cause, asphyxia and death. But if the operation we propose (laryngotomy) be substituted, the insertion of a tube we believe to be seldom necessary; for when a portion of the cricoid cartilage is removed, as recommended, the elasticity of the remainder keeps the aperture from closing, as long as the exigencies of the case may require. This operation, neither dangerous nor difficult to perform, may be executed in an emergency by almost any medical man, and with almost any cutting instrument.—Whereas, tracheotomy, both dangerous and difficult to perform, requires a *bold, dextrous* and *skilful* surgeon, and a frightul array of instruments ("a straight or convex bistoury, a blunt-pointed bistoury; several canulas armed with threads, and everything which may be required to attach them; very delicate ring and polypus forceps; several simple ligatures, and some needles; erignes, or sounds curved in the form of hooks, and various articles of dressing") for its execution; and is, moreover, attended with a delay perilous (and, as I have witnessed in one case, fatal) to the patient, as well as inconvenient to the operator.

Our operation affords free ingress and egress of air, and an easy exit to matters pernicious to life; gives rest, ease, and comparative quietude to important organs; renders the application of remedies to the seat of the disease practicable; gives time for them and others to operate, and perhaps effect a cure. It does all these quite as well, and we think better, than tracheotomy, and is, therefore, in our opinion at least, the preferable operation.

Besides the removal of the morbid exudation, which is seldom, if ever, the sole cause of suffocation, the leading argument in favor of tracheotomy is the presence of the false membrane in the trachea which is thought to be the principal cause of mischief; hence the necessity of an opening into that organ, which might be partly below the obstruction, while an opening into the larynx would be above it, and consequently useless; but our view of the matter is, that the glottis, affected with spasm, or involved in the disease, or both, interferes with respiration more dangerously than the membrane. We, therefore, all things considered, have come to the foregoing conclusion.

P. S.—We have performed the operation above described (modified to meet individual cases) a considerable number of times (perhaps some fifteen or twenty), and have always found it to answer perfectly well, whether the object was to facilitate respiration, or the removal of extraneous bodies; and have never had recourse to the tube or any other mechanical contrivance for keeping the opening free, with the exception of a strip of adhesive plaster, applied close to each side of the wound, drawn backward and crossed on the nape of the neck, to retract the integuments when they obstructed the passage of air or other matters.

In order to prevent, as much as possible, the inflammation which, from the admission of cold air into the bronchi, so commonly follows these operations, it is a rule with me to direct the temperature of the patient's room to be kept steadily up to 80° Fah. The hint for this was suggested to me many years ago by an unprofessional man, and I have acted upon it with much satisfaction in the treatment of other affections of the lungs of an inflammatory or irritable nature.

Art. III.—*Radical Cure of Reducible Inguinal Hernia, after the method of* C. W. Wutzer, M. D., Director of the Surgical Hospital, and Professor of Surgery at the *University of Bonn, Prussia.*

By J. E. Weber, M. D. [With a wood cut.]

The numerous methods proposed for the cure of reducible inguinal hernia, and recommended by modern surgeons, show most clearly how little any one method has answered the purpose. There are a large number of experienced surgeons, who regard every operation for the cure of reducible hernia as unjustifiable and hopeless, or who at least undervalue it. The reason seems to be, that they demand almost an impossibility from such an operation; and since this cannot be achieved, they undervalue the utility which the operation undoubtedly has. Let us now inquire what the operation after Wutzer's method can accomplish, and we can then decide whether, with proper indications, those who suffer from this ever dangerous affection can be benefited by this new operation.

The method of Wutzer is the application of an instrument (a cut of which is here shown), with which he designs to close the inguinal canal, by invaginating a portion of the scrotum by exercising an equal mechanical pressure upon the entire inner surface of the inguinal canal, which may be at any time increased or diminished, as the individual case requires. He would produce the necessary adhesive inflammation for retaining the invaginated portion of the scrotum, and effect adhesion of the hernial sac, without running the risk of causing an inflammation of the peritoneum, thus endangering the life of the patient.

It is necessary to possess such instruments of various sizes, particularly the cylinders, in order that they may correspond to the different diameters of the inguinal canal of each individual case. The cylinders should not be too small, as it is of great importance that the inguinal canal should be properly filled out by them, so that an equal degree of pressure shall be exerted in every direction on the internal surface of the hernial sac; they should not be, on the other hand, too large, because the cylinders are to be introduced up the internal inguinal ring. Wutzer calls his instrument the *invaginatorium herniale.* (Fig. 1.)

The operative procedure.—After the inguinal parts have been shaved, and the rectum and bladder have been evacuated, the patient is placed in the same position as in that for lithotomy. Then the instrument should be prepared for operating, by taking the plate apart from the cylinder (Fig. 1, *a* and *d*), and drawing the needle (Fig. 1 *c*) outwards, so that its point remains concealed in the anterior opening of the cylinder (*a*).

The surgeon stands between the legs of the patient, and first reduces the intestine which fills the hernial sack. When this is accomplished, he places the point of the index-finger of his left hand upon the scrotum beneath the external abdominal ring, with its palm side directed upwards and outwards. He then pushes the elastic parts of the scrotum, which he has taken hold of, into the inguinal canal, so that the point of this invaginated cone extends a little beyond the internal abdominal ring. Then he bends his index-finger, which is thus far introduced into the inguinal canal, in such a manner that a small free space may exist between its palm surface and the upper surface of the canal, into which space he brings the point of the cylinder. By degrees the cylinder is slowly pushed in the oblique direction of the inguinal canal upwards and outwards, and at the same time the finger is drawn gradually backwards, so that the cylinder may occupy the place of the finger. This manœuvre is not without difficulty.

The invaginated cone returns easily with the finger, and the instrument is insufficient to carry back the cone to the desired position. Should the invaginated cone protrude the least backwards, it will then be necessary to renew entirely the before-stated manœuvre, and, to prevent a like occurrence, the cylinder, being reintroduced, must be more closely pressed against the finger. There are other difficulties in this procedure, viz., when the internal abdominal ring is small, preventing the cylinder with the finger from passing its entrance; in large and old hernias, it is still more difficult, because the cylinder may be carried into the loose cellular tissue between the superficial fascia and the apneurosis of the external oblique muscle. This mistake cannot often be discriminated, and none but a surgeon who has a perfect knowledge of the surgical anatomy of the parts, and who is a careful operator, will easily overcome these difficulties.

As soon as it has been ascertained that the cylinder properly fills up the inguinal canal, the needle (*c*) is then pushed through the integuments; no bleeding will follow, as the point of the needle is three-edged. The plate (*d*) is now joined, by allowing the needle to escape through its anterior opening (*n*). The staff (Fig. 2 *k*) through the posterior (*l*), and the posterior screw (*e*) in the forked hinge (*g*). By means of the screw (*f*) of the staff, the plate is moderately pressed down against the skin, fixing its position by means of the posterior screw in the forked hinge. The operation is now concluded by screwing off the handle (*b*) of the needle, and by covering the point of the needle with a small piece of cork. Under the scrotum a small pillow should be placed for its support.

The patient should be confined to bed in an easy horizontal position, with flexed knees, and a pillow under them. The after treatment should be directed cautiously; on the one hand, no impediments should be allowed to hinder a sufficient degree of inflammation; and on the other, the inflammation should be arrested when proper.

A few days previous to the operation, it will be proper to direct an antiphlogistic diet, and after the operation to cause an increase of the natural evacuation from the bowels. An antiphlogistic treatment will not be necessary if the patient is quiet, and has no disposition to the inflammatory diathesis. The screw which presses the plate against the integuments of the inguinal canal can every two days be tightened, although prudence requires the plate to be lifted every time, in order to ascertain the degree of the existing inflammation. If the inflammation should be found to be more intense than was intended, either the pressure must be taken off or the instrument removed. Generally, it is not necessary to use the instrument longer than six days, which time is sufficient to produce the required adhesion between the invaginated parts and the hernial sac. If the instrument remains too long, instead of the required adhesion a disastrous suppuration and gangrene near the needle may be produced. In irritable individuals, six days may be too short, and in torpid it may be too long a period.

When the instrument is to be taken away, the plate must be first removed; the handle should be screwed to the needle, and then drawn out. The left hand has to fix the invaginated parts, the right hand must cautiously remove the cylinder. The small cavity remaining from the invagination must be filled with soft dry lint, which should be held there by means of adhesive plaster. The suppurating punctured wound, on the place where the needle was, must be treated upon general principles; the patient must remain in bed not only until the wound has cicatrized, but at least eight days longer, in order that the new adhesions may be greatly strengthened. In the inguinal canal a hard plug will be felt, which will be absorbed, and, after a lapse of some time, can scarcely be perceived. The radical cure is permanently established when the adhesions have taken place in the circumference of the entire inguinal canal. The hernial sac cannot leave the place into which it has been pushed by the invagination, as the needle has perforated it at two opposite points, and produced an inflammation between the serous surfaces sufficiently strong to secure at least, at those two points, firm adhesions. Wutzer* considers it very important that his needle attack in this way the hernial sac, and thinks it very remarkable that Gerdy* (who also operates by invaginating the scrotum, for the cure of a reducible hernia, and who perforates also by means of a needle the invaginated scrotum at the highest place to which he has pushed it) should state that his needle never touches the hernial sac. Wutzer says that it is contrary to the anatomy of the parts, and thinks that if it were really so, Gerdy deprived himself of the most important means to secure the success of the operation. Wutzer recommends it as prudent, in order to strengthen the permanent nature of the cure, to direct the patient, as soon as the cicatrization is completed, to wear a slightly pressing truss during three months. This will prevent the invaginated parts, while new adhesions are yet fresh and tender, from coming down to their original place. During the same time, it will be advisable that the patient should not engage in any heavy work.

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* Organon für die gesammte Heilkunde. Bonn, 1840. Vol. I. sec. 1.

The following case, the description of which is taken from the *Organon für gesammte Heilkunde*, vol. i. seç. 1, was operated upon by Wutzer after his method, and was cured. It may serve as an example:

Nicolaus Wolff, thirty-four years of age, a farmer by occupation, had contracted an inguinal hernia on the right side three years before by lifting a heavy load. On the 4th day of October, 1838, he was admitted to the Surgical Hospital at Bonn, suffering from secondary syphilis, of which he was relieved after having undergone a strict medical treatment. After the lapse of a considerable time, that his health might be completely restored, it was resolved to try the above-described operative procedure for the cure of his inguinal hernia. The man very willingly submitted to the chances of the operation, as he had already for some time been unable to do any such work as his occupation peremptorily required. The cause of this was, that the inguinal canal and the abdominal ring of the affected side were so much extended and enlarged, that the best fitted truss could not retain the contents of the hernia. For, after any severe exertion, a part of the bowels invariably appeared before the pad.

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* Schmidt, Jahrbücher, Vol. xiii. 375.

On the 8th of November, 1838, Wutzer, after having reduced the contents of the hernia, introduced his instrument in the way above described, pushed the needle through, and screwed moderately the covering plate against the cylinder. This procedure was quickly performed; the pain at the perforation of the needle was but momentary and slight.

The patient slept well during the following night, his pulse remaining quiet. On the 10th of November, there was slight pain, occasioned by touching the parts which were pressed by the covering-plate. The covering-plate was now a little more tightened. During the following days not the least symptoms of fever appeared, no pain in the bowels, and consequently no indication for bleeding or any antiphlogistic treatment. On the 15th of November there could be felt a hard inflammatory swelling of the soft parts around the cylinder; at the same time, suppuration had taken place where the needle had remained, and it appeared to be the right time to remove the instrument. After this had been done, the invaginated parts presented themselves entirely fixed, remaining as a firm plug in the inguinal canal. Where the needle had perforated the skin, the same was for a small space black and mortified, so that an opening was created, which allowed two probes, of which one was introduced at this opening, the other into the canal of the invaginated part of the scrotum, where the cylinder had been before, to meet each other. All the water injected into the external opening of the canal and invaginated parts flowed out at that opening, as there was now a perfect and free communication between these parts.

The patient continued to keep his bed until the 18th of November, when the cicatrization of the little wound was so far advanced as to allow him to sit up. In a short time, when the wound was completely healed, a slightly pressing truss was applied to the parts, and on the 29th of December the patient was discharged from the hospital perfectly cured, the most accurate examination showing no sign that a hernia had ever existed.

The first description of this procedure was presented by Wutzer in the *Organon für die gesammte Heilkunde*, vol. i., series 1.* He narrates there five cases, of which three were perfectly cured, the other two resulted in no benefit. He added to those an exact history of all operations performed for the cure of reducible inguinal hernia, which is highly interesting. After having followed this, his own method, now more than fifteen years, Wutzer says, in the *Deutsche Klinik*, edited by Goschen, 1849, vol. i., page 32, that he has every reason to be satisfied with the proportion of those he cured to those he discharged unrelieved, particularly when he compares the results of his method with those of all others. This assurance of Wutzer, which comes not from a beginner in surgery, but from a man who already enjoyed the highest reputation as a surgeon, is certainly to be relied on. I wish to add, that he, as a professional man, has very few equals; that he ranks foremost among the most distinguished of our profession, and that an assurance from such an authority is not to be regarded as a figure of speech.

Wutzer collected his first experience during the war with Napoleon, on the same battle-fields that made Larrey's name immortal; and if France can boast of Larrey, Germany can boast of Wutzer. After Wutzer had recommended his method, Seutin, in Brussels, was one of the first who tested it in practice. He operated on eight patients, four of which were cured, as he informed Wutzer, in May, 1840, by letter. Rothmund, in Munich, treated over forty cases, and makes known the astonishing success that he experienced in *Haser's Archiv*, vol. ix., series 2.

During the time that I held the appointment of Assistant Physician of the Emigrant Hospital at Ward's Island, I had occasion to try Wutzer's method four times; two of these cases were perfectly cured, one was relieved so that a truss was able to retain the bowels, one was not cured. Wutzer, himself, has every year, for the last fifteen years, treated many cases in presence of numerous spectators. His operations were in the greatest number of cases successful, in some unsuccessful; but never was the life of a patient endangered by his operation.

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* Edited by Prof. Naumann, Kihan, and Wutzer, Bonn.

Contrary to these experiences, there is Lotteau, in Ghent, who endeavored to improve Wutzer's method, but with so little success, that his patients were more afflicted afterwards than before the operation. Lutens, in Antwerp, operated on a syphilitic patient twice in ten days, and after the unfortunate patient had died of peritonitis, he condemned the operation, believing that his unjustifiable haste to operate had no influence on the result of his case. In America, after I had treated four cases with the success above stated, a gentleman of this city undertook it once in my presence. In consequence of the rough manner in which he introduced the cylinder, he ruptured by force the entire inguinal canal. His operation was of course followed by no success.

Wutzer, in recommending his method, never wished to convey the impression that it would answer for all cases; he knows too well that there are many cases of reducible hernia which are not suitable for *any* operation. It is just here that the surgeon needs sound judgment to decide whether an operation is to be undertaken with a promise of success or not. It is no evidence against a *method* of operating, that it was undertaken where it was evident that *no* operation could be successful.

Should any one ask of Wutzer's operation what it is impossible to achieve,—should he ask that a perfect cure should be realized where no inguinal canal is in existence, as when the internal and external ring have joined to one large opening, or where age or a cachectic diathesis makes a person unfit for *any* operation,—he will be disappointed.

After all, it can be unmistakably said, that, under all circumstances, where a rational surgeon would allow any operative procedure for the cure of reducible hernia, Wutzer's operation affords, more than any other in existence, a surety of success; the greatest importance resting in the fact, that, by governing the instrument rightly, the surgeon has it in his power to increase or diminish the intensity of the intended adhesive inflammation, which no other method in the same manner affords. Wutzer wishes his method tried without prejudice. The purpose of this article is to make this operation known in my adopted country, for the benefit of those who are in need of the radical cure of reducible hernia. Although there are many who boast of the ease with which

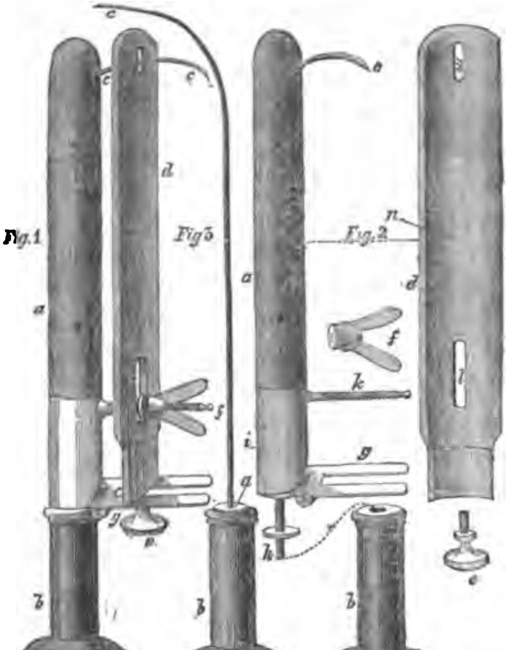
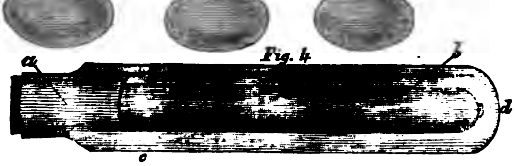


Fig. 4



the hernia may be retained by certain forms of truss, still the frequency of the operations for strangulation, occurring in spite of the instrument used for keeping the gut within the cavity of the abdomen, teaches us the inefficiency of the most valued truss in many cases; and exhibits the propriety of attempting to remedy the liability to this ever dangerous occurrence by the most sure and effectual operation known.

To sum up what may be said with strict truth of this plan of my former preceptor, it is only to be added: 1. With the right indication for operating, Wutzer's method effects a number of cures, greater than any other plan hitherto pursued, and that, too, without endangering the life of the patient. 2. In those cases where the condition of the parts makes a *perfect* cure impossible, this plan will give such relief as will render a truss effectual in retaining the bowels.

With these remarks, the plan is submitted, with the earnest hope that the profession in America will give this operation a fair trial, which has won the approbation of nearly all the best surgeons of Europe.

EXPLANATION OF THE FIGURES.

FIG. 1 represents the complete instrument, called Invaginatorium Herniale. *a*—Cylinder, with its anterior end becoming smaller. *b*—Handle of the needle. *c*—Curved point of the needle, passing out of the anterior opening of the cylinder, and through the anterior opening of the plate, which covers the cylinder. *d*—The covering-plate itself. *e*—The screw which fastens the posterior end of the plate to the forked pedestal. *f*—The screw which presses down the covering plate against the cylinder. *g*—The forked pedestal, the slit of which receives the posterior end of the plate; a hinge unites a metal covering of the posterior end of the cylinder. The metallic parts of the instrument are to be made of a non-oxygenizing metal, with the exception of the needle, which should be of steel.

FIG. 2. The instrument taken apart. *a*—The cylinder, made of box-wood or ivory; upon the upper surface of the anterior end is a small round opening, in which terminates a metallic canal, running through the middle of the cylinder, and made for the reception of the needle. *b*—Handle of the needle. *c*—Point of the needle. *d*—The plate, made of the same material as the cylinder. *e*—The screw which fastens the plate to the pedestal. *f*—The screw which presses the plate against the cylinder. *g*—The forked pedestal for the reception of the screw. *h*—The posterior end of the needle, with a metallic screw taken

from the corresponding end of the handle (*b*). *i*—The metallic covering of the posterior end of the cylinder for fastening the pedestal *g* and the staff (*k*). *k*—The metallic staff for the reception in the opening (*l*) of the plate. *l*—The posterior or oval opening of the plate. *m*—The anterior oval opening of the plate for the reception of the needle. *n*—The upper surface of the plate, a little convex.

FIG. 3. The needle of steel, with its wooden handle. *a*—The posterior end of the needle, screwed into the handle. *b*—Handle. *c*—Curved three-edged point of the needle.

FIG. 4. The representation of the proportionate breadth between the cylinder and plate. *a*—The posterior end of the cylinder. *b*—The anterior end of the same, somewhat smaller. *c*—The left lateral border of the plate. *d*—The anterior end of the plate, with a small part of its anterior opening.

All of the figures are one-half the original size.

ART. IV.—*A Case of Extensive Caries of the Vertebræ; Death; Autopsy.* By DRS. LOUIS BAUER and BARTHELMESS, Brooklyn, N. Y.

THE history of the following case is of such an extraordinary nature that its communication to the medical public is at least justifiable, if not a matter of duty:

Edward T——, from Toledo, State of Ohio, when about five years of age, suffered for a considerable period an attack of intermittent fever. He was ultimately cured; but there remained a considerable enlargement of the spleen, and a marked poverty of the blood. A year later he fell on his back; the fall, however, did not cause any apparent injury of the spine; he moved and played about for three weeks without complaining, and enjoyed his usual delicate health. At this time he assumed a peculiar gait, and complained of pains in his back. The alarmed parents placed the little patient immediately under proper medical care, and all proper means were employed to prevent the progress of an inflammation, which was unmistakably established. Besides rest, a horizontal position, and antiphlogistic treatment, an issue on either side of the affected spine was established, but without any beneficial result whatever. On the contrary, the affected spine became deformed posteriorly, consecutive abscesses were formed on the back itself, near the place of the affected vertebræ, in the left groin, immediately below Poupart's ligament, and on the internal and posterior surface of the thigh, which kept up a discharge, until his death on the 16th of November last.

About two years previously, the right hip-joint became affected, and the head of the femur projected rather more posteriorly and superiorly than normal, as compared with the position of the acetabulum. The parents having consulted a number of noted surgeons, and having ascertained from all of them that the case of their beloved child was both incurable and hopeless, devoted all their time to him in order to render him as comfortable as possible. They travelled many thousand miles, with the patient seated on a low chair having arm-crutches, to give him the benefit of change of air and impressions, which contributed materially to his comfort and mental enjoyment. The intellectual power of the lad became developed rather above his age, and his power of observation was especially increased. His intellect remained undisturbed to his death. In the spring of this year, the parents took the patient to the hot springs in Arkansas upon their own responsibility; but neither the use of various medicines, nor the hot springs, had any effect in staying the progress of the disease. Cod-liver oil was the only drug which acted beneficially by increasing his weight.

In the latter part of October, the patient was presented for examination at the Orthopædic Institution, and the advice of the two medical attendants of that Institution desired. The case-book of this establishment contains the following description of his *status morbi præsens:* General emaciation, considerable loss of flesh, intense paleness on account of anæmia, large posterior curvature of the spine, commencing with the third thoracic vertebra, terminating with the third lumbar; the projection in its highest point showing a distance of about five inches from the perpendicular of the body; the ribs being elevated, particularly the lower ones, which are somewhat turned on their respective longitudinal axes; the thorax, nevertheless, approaching the pelvis. This accounts for the shortness of the trunk. The movements of the chest are limited by the partially fixed position of the ribs; the abdomen is much distended, and appears more full on the left side; scores of veins are perceptible in the skin; the pelvis has a normal position, and the *rima natum* forms with its transversal axis a right angle; the right hip, however, especially the large trochanter and the head of the femur, occupy a place rather higher and more backward than the acetabulum, and fluctuation within the projecting part is clearly made out. The right leg was thrown up and kept in a bent position at both the hip and knee-joint, besides being adducted. The diagnosis, as regards the actual state of the right hip-joint, was not clearly established, on account of the intense painfulness of the joint and surrounding parts. Chloroform, under the existing circumstances, was out of the question. At the most prominent part of the back, there were two cicatrices from the setons, and two slightly discharging ulcers. In the left groin there was a very large ulcer, of an oblong form, with sinuous margins and granulated walls. The extent, direction, and base could not be ascertained, for reasons already stated. On the right leg there were some other ulcers of a similar appearance, at and below the small trochanter. All these ulcers still continued to discharge a thin yellowish matter, being a watery fluid, mixed with true pus and casein-like substance. The spine was by no means tender. The respiration, as would be supposed, was somewhat difficult, but no morbid respiratory sound was perceptible, nor was there any dullness except at the lower part of the left lung, which, as we shall soon see, was caused by the enlargement of the spleen. The sounds of the heart were weak, but natural; no apparent disturbance of the circulation; no lividity of the cheeks, lips, or nails; no pulsations of the veins; no cough or rattling noise. The abdomen, as already stated, was greatly distended, principally with gas, appetite feeble but natural, egestion regular and of normal appearance. The urine was not examined, which is to be regretted, as the post-mortem examination showed a fatty degeneration of the kidneys, most likely having produced albuminuria; sleep was rather restless, feverish, and disturbed by colliquative and copious perspirations; the pulse was accelerated, being 125–130, small and weak.

The following is our opinion of the patho-genetic development of the disease: The intermittent fever we consider as the starting-point, which left within the spleen a considerable enlargement, with disorganization, which, however, ante mortem, is rather hypothetical. Disease of the spleen never fails to produce a most dangerous influence upon the chemical constituents and the organization of the blood, consisting principally in a superabundance of granulated blood-corpuscles, producing that state which is known under the term of anæmia, or, as Philipp Von Walther figuratively calls it, *white-blood.* In connection with this state of the blood, tuberculous deposits are of frequent occurrence. The writers presume that tuberculous depositions, within the cancellated texture of the affected vertebral bodies, had been subsequently effected; the fall, sustained, gave rise to a softening of those tuberculous masses, inflammation and suppuration set in, which account for all other symptoms. The sores are considered the external outlets of the fistulous ducts, which lead from the affected bones to the surface. Under these circumstances, we agreed entirely with our medical brethren, previously consulted as to the incurability and hopelessness of the case in question. There are scores of instances on record, where caries of the spine has recovered with true anchylosis, and therefore the prognosis cannot be given invariably as a bad one, provided the carious destruction is limited, and the constitution tolerably good. Our case, however, was the most unfavorable form to be met with; the destruction was unquestionably extensive, and the system entirely exhausted. The parents, however, desired his reception into the Orthopædic Institution, hoping that something might be done for their child, and accordingly the patient was received into the establishment on the 23d of October. The following treatment was agreed upon: The best animal food, wine, and beer in abundance was given him, besides cod-liver oil and iron, alternately with quinine, rest and good air. We intended to administer every other day a bath with potassæ, and the injection of the bath water into the sinuses, for the purpose of cleansing them; finally, we designed to apply a wire cuirass on the posterior half of his trunk, to keep his spine in an immovable and firm, and his body in a horizontal, position. As the cuirass was to correspond with the different projections of his body, it would have been the most comfortable bed for the patient. But the early decease of the patient frustrated all our plans, and reduced our treatment to the mere diætetic and medical part. The patient, having been only a fortnight in the Institution, was attacked by a most violent fever, swelling of the legs, and consecutive erysipelas, which commenced on his back, and gradually extended over the inferior extremities. Œdema and sugillations came on, to which the enervated body of the patient yielded on the 16th of November.

Twelve hours after death, the corpse was already greatly decomposed, so that the post-mortem examination was fully justifiable at this time. The lungs were healthy; the right ventricle of the heart was large, its walls flabby and uncommonly thin, the cavity filled with decomposed venous blood; the left ventricle was of the usual size, filled with a fibrous coagulation, which extended into the aorta. Stomach and intestines healthy, but much distended with gas. The mesenteric glands intumesced and solidified, but not much enlarged; the liver generally healthy and of usual size,—the parenchyma, however, showed small fatty points in abundance; pancreas indurated; spleen very much enlarged, and weighing forty ounces, which shows an increase of five times compared with the spleen of an adult. Kidneys in the commencement of fatty degeneration (second stage of morbus Brightii). The most surprising degeneration, however, to be found, concerned the skeleton. To commence with the spine, which of course was laid bare and longitudinally divided in front: it showed tuberculous deposits, and, respectively, cavities of various size up to a small bean, in the bodies of the thoracic vertebræ, from the fourth to the eleventh; the lower ones had outlets, which opened in the principal abscess formed by the fragment of the eleventh thoracic vertebra, a fragment of the second lumbar vertebra, and the superior surface of the body of the third lumbar vertebra. The greatest part of the eleventh thoracic and second lumbar vertebra, and the first lumbar vertebra, had entirely disappeared. Although the various abscesses were located near the dura mater of the medulla spinalis, neither this membrane nor the spinal cord had been in any way affected, but, on the contrary, proved to be in their full integrity. As a matter of course, the cancellated texture of all the vertebral bodies below the fourth thoracic vertebra was engorged with a bloody liquid, and softened. So the intervertebral cartilages were partially destroyed (entirely from the tenth thoracic to the third lumbar vertebra), and partly softened and infiltrated with a gelatinous substance; moreover, they were distended in front, and compressed, and lower in the posterior part, which accounts for the anterior counter-curvature above and below the posterior one. The adjoining cellular tissue, ligaments, and muscles on the lateral surface of the spine, were infiltrated with inflammatory exudations, firm and of a cartilaginous consistence. From the principal osseous ulceration of the spine, two sinuses descended to the groin; the left sinus was so wide that the finger could easily be introduced into it; it followed the direction of the psoas muscle, and opened immediately below Poupart's ligament on the surface of the skin. The right one followed the psoas muscle to the point where it meets the iliaco-internus muscle, then passed over the horizontal ramus of the os pubis, descended outwardly, and entered the right hip-joint, from whence the exit of the matter was effected by other sinuses opening in the thigh; both sinuses were lined and filled with the cheese-like substance.

The left hip-joint was found to be in full integrity, but filled with a bloody serous liquid, which made its escape when the joint was opened. The right hip-joint, however, presented a most peculiar appearance. The acetabulum was enlarged backwardly and superiorly, without its edge being in any way carious or destroyed. The enlargement of the acetabulum had been produced by an inflammatory process on the surface of the gluteus minimus and the synovial membrane, and the capsular ligament had been distended, so as to cover the new articular surface. The head of the femur, which occupied the new place partially, was engorged with the bloody liquid, and so soft, that it took easily the impression of the finger; the ligamentum teres and articular cartilages were entirely gone. The capsular ligament was thickened, and adhered firmly to the surrounding parts. Below the small trochanter, the femur was totally severed by caries from the head; the medullar cavity of the bone was enlarged, and filled with a bloody, but somewhat consistent secretion; the cortical substance was fragile, and exceedingly thin.

The history of the case, and the state of the parts found on post-mortem examination, is in many respects exceedingly interesting, both for surgical science and practice.

1. The case teaches us how much nature may endure, before life becomes extinct, and that she never yields until she has exhausted the materials and resources at her command.

2. That there may be most extensive destruction of the head of the femur, and even, as in this case, entire separation from the thigh-bone, without actual and perfect dislocation, although there was no resistance to the occurrence of that accident. This case, therefore, corroborates the views held on this subject by Professor March, of Albany, Dr. Ross, of Altona, and others, besides our own. The *status morbi* could have been easily ascertained by the use of chloroform; but we deemed ourselves not justified in employing it. Instantaneous death might have followed, and thus increased

the number of fatal experiments with chloroform. We were therefore limited to a superficial examination, quite insufficient to render diagnosis certain in cases like this.

3. A most extensive destruction within the hip-joint may take place without any alteration in the position of the pelvis, provided the lumbar vertebræ are immovably fixed, and do not yield to muscular retraction.

There remains, however, a doubt as to whether the commencement of tuberculous deposit was established before or after the external injury, and it is left to further investigation whether our opinions are correct or not. We, however, believe, that the tuberculous deposits were primarily formed before the injury actually took place; but we admit, at the same time, that we cannot disprove the reverse opinion, namely, that tuberculous deposits have been determined by the injury.

We design in future communications, the materials for which have been accumulating for some time past, to continue our observations upon this interesting and most important branch of practical surgery. If truthfulness and scientific exertion can insure the esteem and support of the medical profession, we confidently trust to merit them.

ART. V.—*On the Radical Treatment of Hydrocele by the Local Application of the Lunar Caustic to the Internal Surface of the Tunica Vaginalis.* By W. PARKER, M. D., Professor of Surgery in the College of Physicians and Surgeons, New-York.

A GREAT variety of methods have been proposed to effect the radical cure of hydrocele, such as, *incision* to lay open the sac, *excision* of a portion of the sac, *caustics* externally applied, *tents* passed through the sac, *injections* of various stimulating liquids, &c. The design in the practice of each of these operations is either to excite such a degree of inflammation as shall cause adhesion of the opposed serous surfaces of the tunica vaginalis and thus obliterate the sac, or so change the character of these surfaces as to diminish the secretion to its normal quantity.

The operation by injection of a stimulating fluid was one of the earliest proposed, and is now more generally practised than any other, not so much for the ease with which it is performed as the certainty of its effecting a cure. For a long time, wine and water composed the mixture employed, and Sir James Earle, who introduced them, stated that he scarcely ever failed in obtaining a radical cure. But this confidence in injections does not accord with the experience of other surgeons, and Sir Astley Cooper, who used a solution of sulphate of zinc, remarks that it is quite contrary to his own, though he preferred it to any other method then followed. More recently, however, the tincture of iodine has come into use, and having proved more safe and efficient than the liquids previously employed, it has nearly superseded all others. In eleven hundred and forty-eight cases it is stated to have failed but three times; and in ten cases, where both wine and the sulphate of zinc had been used unsuccessfully, it failed but once. Injections, however, of all kinds require tact in their employment, and time in their preparation and administration. When unskilfully used, they are often attended with serious consequences. I have not myself been in the habit of resorting to them for the cure of hydrocele in many years, preferring the simple evacuation of the water with scarifications of the internal surface of the sac, especially in children, or the introduction of a tent. More recently, however, I have resorted to the local application of the solid nitrate of silver to the internal surface of the tunica vaginalis in the manner described below, and have every reason to be satisfied with this method of treating hydrocele. It is at once easily and safely performed, and, as far as my experience goes, has been attended with entire success. It does not seem to induce so great a degree of inflammatory excitement as most other methods. The following may, therefore, be stated as its advantages over other operations: 1. The ease and safety with which it may be performed. 2. The less liability to severe inflammation. 3. The certainty of success. The following cases illustrate the mode of operating, and the results of treatment:

Case 1.—Mr. J., aged about 60, an Irishman, waiter by occupation, unmarried, had always enjoyed good health until April last, when he discovered an enlargement of the left scrotum. It had never previously been the seat of any difficulty. The tumor increased so rapidly, that within three weeks it had become a great annoyance, and prevented him, simply from its size, from continuing at his business. At this time I first saw him, and such had been the rapidity of the growth of the tumor, that it had been mistaken for hernia, and he was wearing a truss. On examination, however, its true character, that of hydrocele, was made out without difficulty; a trocar and canula were accordingly introduced, and a large quantity of water withdrawn, and the patient dismissed. In about three weeks he again applied for relief, and I proceeded to operate for his radical cure in the following manner: After drawing off the fluid contents of the tumor in the ordinary way, I introduced through the canula a common probe, the end of which was coated, for half an inch or more, with nitrate of silver. This extremity, thus charged with the caustic, was carried lightly over the serous surface of the tunica vaginalis, in various directions, and then removed. The patient complained of some pain during this part of the operation. He was directed to keep quiet for the pain and swelling consequent on the application of the caustic, and apply cooling lotions, should the inflammation be at all severe. He returned home, but as he suffered but little pain, and the swelling was slight, and as his services could not well be spared, he continued about his business without any interruption. The pain lasted three or four days, when it ceased altogether, leaving the scrotum of its natural size. In this condition it has since remained, with no symptoms of a return of the hydrocele, the cure having been complete.

Case 2.—Mr. ——, aged about 50, a farmer from Long

Island, has always enjoyed good health, and been able to perform the active and laborious duties of the farm. For nearly two years he has suffered from a slowly-enlarging hydrocele, the origin of which is attributed by the laborers on the farm to the water which they use; for, singularly enough, several of them began to suffer from the same disease at the same time with this patient. The water is stated, by an intelligent person acquainted with the facts, to have a strongly diuretic effect upon those who use it, but no analysis has yet been made of it, which would lead to an explanation of this peculiarity which the water seems to possess. In this case, the tumor had been twice tapped during the last year, and about a pint of fluid was removed at each time. The first operation was performed about six months, and the last nearly three months, previously to the present operation. The tumor rapidly regained its former size after each operation, as no means were employed to effect a radical cure. After withdrawing the water, I proceeded to operate in a manner precisely as above described. The application of the caustic produced severe pain, much more so than in the former case. The patient was placed in bed, and an antiphlogistic regimen prescribed. The pain continued without any diminution of its severity for fourteen hours, when it began to subside. The inflammation excited by the operation was considerable, with swelling of the scrotum and some febrile excitement; he was confined to his bed three or four days, until the inflammation had subsided, when he returned to his farm. The swelling of the scrotum continued about a month, when, on the application of a spirit lotion, it returned to its natural size, and a permanent cure was effected.

CASE 3.—Mr. B., of Penn., aged 55, of very intemperate habits and enfeebled constitution, applied for treatment of an old hydrocele. The operation was performed as in the preceding cases. Considerable pain was experienced at the time of the operation, and the subsequent inflammation and swelling was greater than in either of the former cases, doubtless owing somewhat to his unfavorable condition of system. It progressed favorably, however, and he was soon able to leave for home. I have recently learned that the operation was successful, there being no return of his difficulty.

Case 4.—Mr. J. F., bookseller, aged 26, very intemperate, first noticed an enlargement of the scrotum seven months previously to the operation. The caustic was applied, as in the former cases, on the 6th of last August. The pain was considerable, and the inflammation as severe as in the last: it subsided rapidly in the course of four or five days, and he returned to his business. There has been no return of the disease.

Art. VI.—*On the Necessity of Revaccination.* By G. Benedict, M. D., Physician to the Northwestern Dispensary, N. Y.

The complete failure of vaccination in some instances to protect the system against smallpox, and its partial failure in other cases, has led to various theories and practices. Some have in a measure doubted its efficiency, others have rejected it as worthless, while others still have endeavored to discover the reason of such failures, in order if possible to obviate them.

Action has wonderfully corresponded with sentiment. Vaccination has been carelessly performed, and suffered to run its course unregarded, or it has been entirely neglected; or, on the other hand, has been performed with due care and watched with interest.

As yet the fact stands as it ever has done. Vaccination sometimes fails, sometimes it seems to exert a complete protecting influence against a most loathsome and very fatal disease. Hence the question, as to the cause of, this, is in truth a very important one. It will hardly do to put it aside, by considering the case analogous to that in which specific remedies for various disorders are employed with more or less general success, and yet with now and then a failure. For we have no so-called specific for any one disease, which is not also used with more or less benefit in other diseases, so that, in different states of the constitution, it is productive of good results. We have yet to learn that the vaccine infection affords the least protection against any other than the variolous disease. It is said by some to exert a protecting influence against measles, by rendering the attack less severe; but our own observation contradicts the assertion. The mode too of introducing this protecting agent into the system, is different from that of other remedies for existing or expected disease. It is with a view to save the patient from the peril and disfigurement of smallpox that it is employed, and for this alone; and this object we believe it capable of effecting. If we attempt to account for its apparent failure in some instances, on the ground that there is a greater susceptibility to variola in some individuals than in others, we are met by the fact, that many thousands of those who would undoubtedly have suffered from, and succumbed to, the disease, have been saved; and this too when the operation of vaccination has been so carelessly performed. If those only who are least liable to the variolous affection are to be benefited, the great value of the discovery is taken from it. I can conceive no better evidence of the great susceptibility to a disease, and the value of any remedy for it, than I find in the generally admitted fact, that, where once many died, the employment of such remedy has diminished and almost extinguished mortality from such cause. Nor need we, as it seems to me, adopt the opinion, that the changes effected in the system at puberty destroy the hitherto protective power of vaccination. A change it certainly is, from childhood to adolescence; but that the organization of the solids or fluids composing the body undergoes any such modification as to render an active agent inert, or *vice versâ*, is at best hypothetical. It looks too much like the old whim that vaccination should be repeated once in seven years, because in that period its power had all "run out" of the system. The reason is as good in one case as in the other. Comparatively few adults, who were vaccinated in infancy or childhood, are susceptible of successful vaccination. How does this happen if there is such a change at puberty?

Some stress has been laid upon the number and appearance of the cicatrices, as enabling us to judge of the efficacy or inefficacy of vaccination. Doubtless they indicate more or less the efficiency of the pustules, but they alone are not to be relied on. Nor should we judge from the local intensity of the pustule, that it is sufficient or otherwise; for in different individuals and in different states of the constitution, there is great variety in this respect.

We are not permitted to look into the human organism so intelligently as to understand how and by what means all its changes are effected. The action of remedies on the secretions, *e. g.* in various conditions of the system, though the results are often visible and marked enough, is by no means capable of being fully comprehended. And when we come to the question before us,—how the active existence of one poison is rendered forever impossible by the previous existence of another and different poison,—we hesitate for an answer. The results of experience, however, justify the belief that it is so, and we rest upon this belief as a fixed fact.

A peculiarity in my own person, perhaps not remarkably uncommon in others, has led me to attentive thought and careful observation on this subject. I remember to have been vaccinated in childhood several times, before the presence of the virus manifested itself by the formation of a pustule. It did at length happen, and the cicatrix still remains. While at college, a few cases of variola and varioloid appearing among the students, I was again vaccinated, under the impression, that, as seven and even fourteen years had elapsed, I might now be subject to smallpox if exposed. Here again I received the infection, and had a pustule larger, and, so far as memory serves me in regard to the first, more intense than that. About four weeks from the time of revaccination, and after my arm had entirely recovered from its effect, I again vaccinated myself with lymph taken from the arm of a fellow-student. Again, and so soon after the second vaccination, I had a large pustule, which went through a regular course, the scab adhering until about the twelfth day. Now here, after the revaccination, I would have been considered as safe as the vaccine disease could render me, and doubtless, had I suffered from variola, my case would have been set down as one of those in which vaccination had availed nothing. And yet was there any reason why I should not have suffered the full force of the disease, had I been exposed? Since that time I have repeatedly inserted the virus in different situations, with no other effect than the slight irritation which is known to follow the scratch of the lancet charged with the poison in those thoroughly vaccinated. My own experience has been partly confirmed by observation. I have revaccinated many children, and quite a number of them those in whom I have watched the progress of the first pustule. I have seen the revaccination unequivocally successful in only eight cases, and in no instance have I been satisfied that true vaccinia was present the third time. Revaccination of adults has been successful in about the same proportion as in children.

My observations have not been sufficiently extensive to establish any new fact, but I make them known that others may observe also, and see if they do not confirm the following proposition:

That vaccination, properly performed, and repeated until the susceptibility to the vaccine disease is exhausted from the system, affords entire immunity from the variolous disease.

It may seem that, by including so much, my proposition is worthless, as it would extinguish not only the genuine disease, but its modification, varioloid. But we are to bear in mind that one, two, or three successive pustules may still leave the system unprotected, at least in part. Vaccination should be repeated until nothing like a pustule can be obtained. Let each one observe for himself, until evidence accumulates which shall sustain or overthrow this position; and let no one say that vaccination is not a protection for those in whom the susceptibility to variola is unusually strong, until he first ascertains whether there is not still left some susceptibility to vaccinia.

Art. VII.—*Notes of a Case of Enteromalacia.* By Thomas Addis Emmet, M. D., Visiting Physician to the State Emigrant Hospital, Ward's Island.

An infant, ten months of age, of a young and healthy German woman, was admitted to the hospital, March 3d, 1853, with pertussis, which ran its course without complication, and the child had so far convalesced during the past month as to have rapidly regained apparently its lost flesh and strength.

July 10th.—Dr. Irwin, the resident physician in charge, drew my attention to the child as being unusually fretful, and not having nursed well for several days previous. During the night a slight diarrhœa had set in, evacuations green in color and acid in character. I found the heat of skin greater than natural, gums red and swollen, with a constant dribbling of saliva; directed them to be scarified, and not to check the discharge from the bowels without it became necessary.

July 11th.—The resident physician, on cutting the gums, found the teeth not sufficiently advanced to be the cause of irritation. During my absence, the diarrhœa becoming too profuse, it was ordered about three grains of the nitrate of soda every two hours, with a warm bath and fomentations to the bowels, to relieve the increasing tympanitis. By these means the discharges became partially checked, while vomiting had supervened, similar in character with the discharges from the bowels. Found the pulse feeble and irregular, respiration hurried somewhat and jerking in character, temperature of the body increased, that of the extremities diminished, features more pinched and sardonic in expression, abdomen distended with flatus, pain evinced on pressure over the right iliac fossa, while the child attempted to protect itself with its hands; legs drawn up and flexed on the trunk, with the knees turned inwards, urine sufficient in quantity and had been passed freely. Directed mustard drafts to be applied to the epigastrium, one-half grain hydrarg. ch. mitis, every two hours, until three or four doses had been administered, watching its effects, together with tinct. opii camph. to assist the nitrate of soda and overcome the insomnia, which throughout had been most distressing.

July 12*th.*—Emaciating rapidly, with the characteristic appearance of one dying of tabes, features sunken, dark areola around the eyes, cornea flattened and clouded from infiltration between its coats, heat of body less than yesterday, extremities cold and clammy, knees still flexed, abdomen not so much distended, but little pain or uneasiness evinced on pressure, while the child remains quiet, if not disturbed from its chosen position. The discharges from the bowels had been checked, but the vomiting continued from time to time. By artificial means, the natural temperature of the body had been partially restored, stimulants were used as freely as the circumstances of the case would admit; no effect produced by the anodyne. Remedies were now discontinued, as the patient was rapidly sinking; died during the forenoon, about seventy or seventy-five hours from the apparent commencement of the attack.

Post-mortem examination twelve hours after death.—The weather being remarkably cool for the season, no decomposition had set in. On opening the abdomen, the intestines were found blanched, and exhibited a peculiar waxen appearance. Found no evidence of peritonitis, strangulation, intussusception, or perforation of the intestines; but in attempting to remove the lower portion of the ilium, near the cœcum, rupture took place readily in several places, and the contents passed into the cavity of the abdomen. While washing the portions removed, they rapidly disorganized into a gelatinous pulp. On holding sections of the small intestines towards the light, it was found that the mucous and muscular coats had disappeared in patches, varying in size from a millet seed to that of a three-cent piece, leaving the serous one still in its integrity. This state of things existed nearly throughout the ilium, with an enlargement of the solitary glands, having the appearance of miliary tubercles. The patches in the ascending colon (although somewhat larger) were confined exclusively to its lower third. The vessels between the omentum were empty, and could with difficulty be traced, while there existed an unusual enlargement of the mesenteric glands, hard and red in color. The other organs were healthy; brain not examined.

This disease, although described by writers as non-inflammatory in character, and owing to faulty nutrition, is rarely ever met with among the large number of emigrant children admitted to the hospital. This is the first case I have seen, among several thousands treated during my time of service in the institution as a resident and visiting physician.

Art. VIII.—*Case of Persistent Vomiting, arising from Intestinal Calculus; followed by Death.* By —— Dudley, M. D., of Brooklyn, L. I.

Tuesday, Sept. 13th, 7 A. M.—Was called to visit Captain P. W——, whom I found vomiting and complaining of severe pain in the region of the stomach. I learned this state of things had existed through the night, at short intervals. The contents of the stomach ejected were bilious matter, mixed with undigested fruit, which he had eaten the evening previous. The skin, moist and cool; tongue, slightly furred; pulse, 84, soft and full; respiration, thoracic and easy; passed urine freely; had a movement from bowels the morning previous; no tenderness on pressure over the abdomen. In order to relieve the more urgent symptoms, I prescribed pills composed of ½ gr. op. and 3 grs. calomel, to be repeated every two or three hours until relieved; also a mustard poultice over the region of the stomach. At 1 P. M. found the vomiting unabated and the pain increased since my visit in the morning, and at one time had become so severe, that, having sent for me and not finding me at home, he called on Dr. Enos, who ordered same treatment, also administered an opiate injection. This treatment was continued during the remainder of the day and night following, increasing the opium to 1 gr. each dose. Ice, mint tea, toast-water, given at short intervals, to allay the thirst and vomiting. 9 o'clock P. M., visit.—No material change since last visit.

Wednesday, 7 A. M.—Learned from his friend, who sat up with him, that he had but little sleep; the vomiting continuing at intervals of half an hour to an hour, preceded by copious eructations of gas. I ordered him 10 grs. rhubarb in pills, alternated with a teaspoonful of Henry's magnesia, to be repeated every two hours, until an operation was produced, assisted by injections of soapsuds and castor oil. On visiting my patient at noon, found he had taken the medicine for three doses, but rejected them soon after; the longest time retained was half an hour. The vomiting not relieved. Ordered a blister to the pit of the stomach, which he refused to have applied, and became fretful and impatient. At 6 P. M., found that he had slept a little, but symptoms had not improved. 9 P. M.—Consultation with Drs. Pratt and Enos, when we agreed to put him under the decided effects of opiates; viz., 20 drops Magendie's solut. morph. in camphor, mixture, every two hours, alternated with injections of tinct. opi. 3 gr. in warm water, until sleep was produced. Twelve at night, left him under the effects of the anodyne.

Thursday, 7 A. M.—Soon after I left last night, he became restless, slept little, vomiting returned, but pain much mitigated; treatment same; ordered arrow-root, with brandy, in small quantities, but these he soon ejected. 10 A. M.—Consultation; after examining our patient, concluded on applying a blister to the stomach, and giving pills, of 10 grs. calomel and 1 gr. opi., every two hours, for three doses; also, injections of soapsuds in large and repeated quantities. 3 P. M.—More quiet, had little rest, vomiting not so frequent, continued same treatment. At 6 P. M., dressed blister and repeated injections. 10 P. M.—Vomiting increased, appearance and smell presented, for the first time, a stercoratious character, which aroused our suspicion of obstruction existing somewhere. All his other symptoms bore a negative testimony to either concealed hernia or intussusception; the pulse continuing about 80 to 84, full and soft; skin, moist and warm, mind clear. I stayed with him all night, and succeeded in getting him under the influence of the opiates.

Friday, 10 A. M.—No great change in his general symptoms; said he felt more refreshed from the sleep the night before. Gave Seidlitz powder, which, although he did not retain long, said was particularly grateful to him. Same treatment, with some slight alteration in the opium, to be continued; and to increase the anodyne injections to three drachms, and dress the blister with morphine ointment. 2 P. M.—Had vomited during the day large quantities of fluid which he had taken, mixed with stercoratious matter; ordered soda draughts at intervals, brandy and water, gum-water alternated. Refused all other kind of nourishment. 6 P. M.—Agreed to give a draught composed of hydrocyanic acid, 1 drop; Magend. solut., morphia, fifteen drops; simple syrup, half an ounce; to be repeated every third hour till sleep was produced. 11 P. M.—Same treatment; as sleep was produced, the draught was omitted.

Saturday, 7 A. M.—The latter part of the night rather restless, vomiting returned, no pain or tenderness on pressure, injection administered of soapsuds and castor oil, no fæcal discharge. 10 A. M.—Symptoms much the same as yesterday; injections continued (through the long tube) every two hours, but without any satisfactory result. Drinks and nourishment the same. 6 P. M.—Consultation. Anodyne treatment, both by draughts and injection, repeated until sleep was produced; omitted hydrocyanic acid. 10 P. M.—Had some sleep; vomiting not so frequent; character the same. Anodyne draughts repeated. Sour drinks only desired.

Sunday, 7 A. M.—Passed a rather quiet night, until near morning, when he became restless, and the vomiting soon returned, particularly on taking the slightest nourishment. No other perceptible change. 10 A. M.—Agreed to continue the anodyne treatment, and support him with such nourishment as he could retain. 2 P. M.—Slept a little during the day. Complains of no pain, pulse 84, soft and full, respiration normal, skin moist and warm, mind clear, expressed himself more comfortable, mind free, and looks healthy. 7 P. M.—No alteration since our last visit in the condition of his bowels. We gave croton oil in doses of two drops, assisted by copious injections every alternate two hours, for three doses; he vomited the first almost immediately, and the other in an hour and a half. Introduced O'Berne's tube, 20 inches, into the bowels, and passed up injections through it; but no fæcal matter returned. 12, Midnight.—No palliation of his symptoms; and the vomiting continuing at intervals of twenty to thirty minutes, convinced us that obstruction existed somewhere in the small intestines, from the character of the matter ejected, &c.; but the cause could not, by any evidence manifested, be either pointed out or satisfactorily explained; concluded, with the concurrence of his friend, to call in Dr. Williard Parker in consultation with us.

Monday, 10 A. M.—Consultation. After a careful examination and review of the case, we supposed the obstruction arose from spasmodic contraction of the muscular coat of the intestine, accompanied by a gouty diathesis. Agreed to continue the anodyne treatment with vini colchici. 2 P. M.—Symptoms and treatment same. 9 P. M.—Administered a large injection through O'Berne's tube, which returned no fæcal matter or smell; ordered anodyne injection given as before, and morphia draught repeated.

Tuesday, 10 A. M.—Consultation. Same treatment advised, no perceptible change in his symptoms. Dr. Fish, his family physician, having arrived from Savannah, joined our consultation this time; treatment explained and concurred in by him. 2 P. M.—Symptoms and treatment same. 9 P. M.—Gave a large injection, followed by an anodyne, the anodyne draught to be repeated at intervals of three hours, until sleep is produced.

Wednesday, 10 A. M.—Consultation. There being no abatement in his symptoms, we agreed to repeat the croton oil in same doses as before in draughts; but observing no good effect after two doses, it was omitted. 2 P. M.—Gave a large injection of arrow-root, which remained some time, part only coming away; nourishment in small quantities continued. 10 P. M.—Gave a large stimulating injection with castor-oil, salt, and turpentine, repeated twice; and afterward gave an anodyne injection.

Thursday, 10 A. M.—Passed a restless night, and appeared much worse in all respects; pulse much smaller and more frequent, skin cold, mind wandering. Gave brandy and water frequently, applied mustard, warm applications to feet. At 4 P. M. he expired.

Friday, 12 M.—*Autopsy twenty hours after death.* (Abdominal viscera only examined.) External appearance: slight tympanitis. State of the blood general. Internal, found all the organs rightly located; the peritoneum was completely injected, and fibrinous effusion in its cavity; the intestinal folds were agglutinated in many parts by recent adhesions. I removed the bowels from the cavity for more convenient examination, and commenced from above. At the lower part of the superior third of the jejunum, found a large perforation from ulceration, and several smaller ulcers along the middle third; in the lower portion of this part of the intestine found a large concretion, composed, from its appearance, of magnesia and charcoal firmly impacted. Here, no doubt, existed the obstruction and the cause of death. Dr. Fish, his physician, informed me he had been in the habit of using these articles freely and frequently for many years. Size, length, two inches; diameter, one and a quarter inch. Weight —.

Analysis of urine.—Sp. Gr. 1.022; reaction acid. *Color and odor* normal.

Microscopic examination gave no indication of organic or functional disease.

ART. IX.—*On Functional and Sympathetic Affections of the Heart.* (Read before the Society of Statistical Medicine.) By JOHN W. CORSON, M. D., late Physician to Brooklyn City Hospital. Physician to the N. Y. Dispensary.

IT has latterly become a fearful thing, after certain taps on the chest, and listening through a mysterious tube, to pronounce in the patient's hearing, "*Disease of the Heart.*" For reasons that will appear, we venture in preface a frank confession of delusions and difficulties. We can make almost any man's heart palpitate by simply saying it has something wrong. It is taken as a hint to make a will, or a soft professional whisper, "Thou shalt surely die!"

We can imagine how terrible must be the agony of suspense to the victim of real organic heart disease;—how he inwardly feels that some spring or valve about that treacherous heart is spoiled; and that, sooner or later, like a broken timepiece, it must stop;—how the spectre of death hovers with his lance, like the sword of Damocles over his head, or knocks loudly at his heart, at the desk, the pulpit, the bar, or the bedside;—scares the smile from his face at his own festive board; —or folds him in its arms as the demon of nightmare, and begets the horrible dream that the loved ones who so hopefully bade him adieu at night will find him a lifeless corpse in the morning. And all this cruel alarm may be equally caused by the sham imitation of trifling nervous or functional palpitation. The heart is often a perfect medical puzzle. It sympathizes, at times, so closely with its neighbors, the stomach, liver and lungs, as to perplex a careful physician as to which is most at fault. It has special telegraphic wires to the brain, and through the great sympathetic to the intestinal canal, the kidneys and organs of generation, and it shares in every disorder of these. It has mysterious knockings from reflex nervous influences, the wire-pullers of which are at distant points. Like a wind-harp, it trembles with every thrilling emotion, and is untuned alike by the strain of anger, fear, joy, or sorrow. It is over-excited or paralyzed by every malady which changes its own proper stimulant, the blood. And thus, from slight causes, it may torture its owner with the constant fear of physic and death.

The counterfeits, indeed, are as plenty as the real coin. Perhaps no man ever saw more of heart disease than the late Dr. Hope, and we have the deliberate testimony, in his work, that one half of the private cases were merely functional. We may sincerely endorse this statement, and add that these average the most mental suffering.

The public generally cannot distinguish between the mock imitation and the real. They know only of the fatal kind that startles the neighbors, and fills the newspapers with paragraphs of the sudden decease of jolly Falstaffs and blooming matrons, and the verdicts of coroners' juries of "death from disease of the heart." And, in these days, when sophomores and boarding-school misses take so to textbooks of physiology, and "Medicine made easy" dwindles to a pocket edition—when the "sovereign people" flock, for mere amusement, to travelling lecturers with grim manikins, and learn just anatomy enough to frighten themselves for a shilling—it is hazardous, at the bedside, to mention the word "heart," or kindly try to explain, or mystify, in "words of learned length and thundering sound." While this kind of knowledge, when thorough, may be exceedingly useful to all sensible people, it is commonly just superficial enough to be imaginary death to the morbid and nervous. In physic, both to "him who gives, and him who takes," infinitesimal learning is positively a "dangerous thing." There is scarcely a gloomy dyspeptic who has not his health-book full of alarming woodcuts of brains, stomachs, lungs and hearts, and who does not wonder how he lives from day to day, with such a delicate gear. Like a certain hypochondriac, who once read a medical book, and fancied he had the symptoms of every disease in rotation, from apoplexy to itch, he has most vivid imaginings, and no organ suffers more than the heart. And this is not strange. Studying a subject will often make us morbid. Medical students, and dyspeptic physicians themselves, are frequent subjects of this heart-delusion, and quite as honestly frighten and victimize others. We have personally known thriving but sedentary mechanics, enterprising merchants, and master-spirits in the learned professions, incapacitated for years, and finally cured, and enabled to laugh at their sincere medical persecutors, by open-air exercise, a vacation, or a foreign tour. Worse than this, we have seen, within the last fifteen years, pale, hysterical females, for the involuntary compliment their unruly hearts have paid the ear of a learned and handsome physician, wrongly and ungallantly sentenced to digitalis and lacerating cups. These are no trifling mistakes. The treatment of *functional* heart disease, as we know, is generally the very opposite of that of organic. The patient needs active exercise perhaps, and we enjoin paralyzing quiet; he should forget his ailments in hopeful assurance, and we terrify; he wants generous beef and mutton, and we tantalize with low diet and vegetables; he requires bracing tonics, and we depress him with sedatives, and fancy we copy Hope and Bouillaud, in taking his impoverished blood.

Not that we undervalue the attainments of our noble profession. Hippocrates himself, in the first of his immortal aphorisms, has magnanimously confessed that "experience is fallacious and judgment difficult." If men's minds and bodies were all cast by the Creator in the same mould—if all were educated alike, and if human wisdom were perfect, then might we expect medical opinions to be uniform and infallible. Our only astonishment is, that the regular members of the great medical church universal, are, in the main, so correct and unanimous in their faith and practice. But, as Andral and Addison* have told us, perfection in the difficult science of physical diagnosis of chest disease is not so easy. The enthusiastic student, fresh from the beautiful theories of books, and with all its hard names ready on his tongue, is doomed to bitter disappointment, if he imagine that, without long and severe training, his uneducated senses can at the bedside accurately weigh and measure a living heart as it flutters in the bosom, or truly estimate its false alarms, its throbbings, and heavings, and its moanings, faint perchance as those of the sea-shell, that

> "Remembers its august abodes
> And murmurs as the ocean murmured there."

When we remember that, except a few obscure hints in Hippocrates and the older writers, this whole science has risen within the memory of a long-lived generation;—that Laennec himself fell into the blunder of attributing the second sound of the heart to the contraction of the auricles;—that after the sacrifice of so many donkeys and dogs to watch their bare and quivering hearts, the highest authorities are not quite agreed as to the causes of the first sound;—that Skoda, in his masterly work, gives no less than eight different theories, with their authors, to account for the impulse of the heart alone;—surely, it is not strange that disciples should be sometimes mistaken.

Confession, good people tell us, is the first step towards reformation. For ourselves, and our friends, we have tried faithfully to perform this ungracious duty. Mortification indeed, from mistaking our own as well as the cases of valued friends and patients, more than ten years since, first led to the series of observations embodied in this paper. We would fain atone for our early faults by the discovery of more light. Detained by the crowding thoughts long buried, we have lingered thus upon the threshold of the subject, to establish the following propositions:

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* "On the Difficulties and Fallacies of Physical Diagnosis."—GUY'S HOSP. REP.

1st. That functional derangements of the heart often simulate fatal organic disease so closely as entirely to deceive, and cause great and needless suffering.

2nd. That, in cases of cardiac disease, it is therefore always best to defer giving an *unfavorable* opinion, till we have made repeated examinations after exercise and quiet, and until after the test of treatment.

3rd. That this subject is of great importance; is still somewhat obscure, and therefore demands further investigation.

To present a better picture, we shall mingle much that is old and familiar to all with the few things of our own that may be new, in a brief review of the whole subject. Our limits will oblige us to condense as much as possible, and to give but a mere abstract of the cases we may quote from others, or record of our own.

Definition. By functional affections of the heart, we mean its numerous derangements from nervous disturbance, alterations in the blood, or sympathy with neighboring organs, which give no *certain signs of organic change*, in its walls, cavities, or valves, while living, or after death.

Symptoms. As before intimated, many of the symptoms of organic heart disease have their close functional imitation. There may be violent palpitation, unnatural impulse, bellows murmur, intermittent pulse, præcordial pain, or fainting, with difficult breathing, or even swelling of the feet, and yet not the slightest organic lesion, or really dangerous disease of the heart exist; nothing but some sympathetic irritation or mere functional disorder, entirely curable. Let us dwell a moment on each of these.

Palpitation may be said to be the sensation of unusual or painful action of the heart. Though occurring also in organic, it is so prominent a feature of functional cardiac disturbance, that the whole subject has been grouped by some under the head of "Nervous Palpitation." In health we are scarcely conscious of the heart's movements.

The hard bounding of congestion of the heart, the smart throbbing of its irritation, or the fluttering and faltering of its debility, are all disagreeable to the patient, and are all grouped under this common term. In irritation of the heart, connected with dyspepsia, as Abercrombie has well described, the heart sometimes rolls and tumbles like an animal in a tight place, frightening the patient with the wildest antics. Alone, it is commonly a symptom of little danger, and attacks many with slight provocation; generally, it occurs in temporary paroxysms; occasionally, the fits are frequent and severe, disturbing sleep, and leading the nervous patient to gloomy thoughts, like that of Longfellow's, of hearts that—

> "Still, like muffled drums, are beating
> Funeral marches to the grave."

Impulse. In health, and in the upright position, as we all know, with every pulsation, the point of the heart strikes against a circular spot, dull on percussion, a couple of inches broad, opposite the cartilage of the fifth left rib, reaching to the sixth, two inches below and one inch to the sternal side of the left nipple, and technically called the *præcordial region.* The extent, force, and manner of this *impulse,* as it is termed, are important points. The impulse in functional congestion, or irritation of the heart, sometimes jars the whole front of the chest, possibly beyond the left nipple, and below the sixth rib, so as to imitate organic enlargement; but then there is the absence of that infallible test, *extended dullness on percussion.* When the heart is loaded and stimulated by rich blood from sedentary, high living, or violent gymnastic exercise, the *impulse* is *strong* and *bounding;* in the palpitation of hysterical women or delicate nervous men, it is *smart* and *knocking;* and in the exhausted and enervated, it becomes *soft* or *hurried tapping.*

Intermittent pulse. The pulse, as Celsus long ago observed, is sometimes a "thing most fallacious." A matter apparently so important as complete intermission, often means little or nothing. From idiosyncracy it is habitual in some in perfect health. It is very frequent in cardiac irritation from derangement of the stomach. Dr. Billing speaks of it as common with old persons, whose hearts are "lazy" and require generous treatment. It commonly comes on in paroxysms, and may occur from the third to the tenth or twentieth beat of the pulse, or quite irregularly. Laennec has divided it into true or false, as it reaches the radical pulse, or affects the heart alone. While intermission is frequently found in structural lesions, we must admit the aphorism of Skoda, that "the greatest irregularity in its rythm does not warrant us in assuming the existence of organic disease of the heart!"*

Bellows murmur. The valvular murmur of functional derangement is a soft, blowing or whiffing sound, like a light jet of air from a dry syringe; rarely loud, and *never harsh* like organic murmurs;

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* Abhandlung über Perkusson und Auskultation.

confined, as a rule, to the *aortic valves*, and the *first sound*; limited usually to a small space opposite the cartilage of the *second right rib*; occurring in paroxysms with excitement, and ceasing with rest; sometimes with whizzing in the carotids; and almost invariably accompanied by that fitful hum in the jugular veins, like the noise of a top, or distant spinning-wheel, which the French have named the *Bruit de Diable*. The bellows murmur is confined almost entirely to pale anemic subjects, with a *quick pulse*,* suffering from hemorrhage or chlorosis, and having the blood reduced, according to Andral, till it contains much less than the healthy standard of red globules. Laennec believed it sometimes occurred temporarily under excitement in nervous healthy persons. Magendie found that dogs bled largely, acquired a quick, irritable pulse, and a distinct bellows murmur.

Præcordial Pain. Except in the rare cases of angina pectoris which are not organic, and are attended with intense pain, that of ordinary functional affection is rather *uneasiness*, sense of *weight*, or external *soreness*, probably rheumatic or neuralgic; or, in dyspeptic cases it arises from the heart pulsating so near the sensitive stomach; and is then referred to the epigastrium.

Syncope. Fainting has been aptly termed by Bouillaud "momentary paralysis" of the heart.† It varies greatly; sometimes it occurs with merely sudden paleness, dimness of sight, soft thready pulse and sinking, with remaining consciousness, and the patient soon rallies; or he may lie the image of death, pale, cold at the extremities, pulseless at the wrist, apparently breathless, and with only the faintest first sound of the heart for hours or days. The recovery is accompanied by gasping, and sensations generally disagreeable, though in some rare instances they are said to be pleasant. Slight fainting is with nervous persons a very common symptom, and unattended with danger. It is especially characteristic of that form of functional derangement we shall term *debility of the heart*. Prolonged syncope in any cardiac affection is naturally alarming from its close imitation of death, and from the fact that organic disease often terminates in this way, never to rally. Persons also have doubtless been buried alive in this condition.

Dyspnœa. Difficult breathing, though a common symptom of organic difficulties of the heart, occurs in functional disease, principally in those forms of plethoric congestion we shall presently mention, from temporary imperfect arterialization of accumulated blood, or it takes place in the opposite state of anemia, in which, from pure debility, slight exertion will sometimes induce fainting and shortness of breath.

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* Hughes.

† Maladies du Cœur.

Œdema. Dropsical swelling of the feet and legs occasionally excites unnecessary apprehensions in pale chlorotic patients laboring under functional palpitation, with soft bellows murmur. But there are never those dropsical effusions of the chest or abdomen so common in organic disease. It is simply a little passive œdema from weakness, which soon disappears under tonic treatment.

Diagnosis. Functional cardiac affections are so apt to be mistaken for organic, that it seems well to enlarge on this point. Age and constitution, according to Dr. Calthrop Williams, throw some light on the subject. As a very general rule, liable to numerous exceptions, functional disturbance is found in sedentary young men, delicate or sanguine, and in chlorotic or hysterical females, from fifteen to twenty-five; while organic commonly occurs later in life, and in the robust as well as the feeble. The heart affections of childhood are almost invariably organic, and from rheumatism.

Functional symptoms are far the most *variable*, disappearing at times entirely, in sleep or quiet, or re-appearing capriciously in paroxysms during bodily rest, from mental excitement or flatulence, while organic impulse and murmurs are more constant, and easily roused by exertion. Walking rapidly a few times round the room, or up stairs, is a very useful test. It will often have no effect on functional symptoms, but it is sure to embarrass the circulation and breathing in organic disease.

Functional affections are commonly much benefited, or cured by treatment; either improve or remain *stationary a long time*,* while organic are too often only palliated by treatment, and tend gradually to grow worse.

In the slight œdema from chlorosis, we have the *general appearance* of the pale, waxen face, blanched lips, dark areola of the eye, and swelling confined to the *feet* and *legs*; while in the effusion of organic change, the face is bloated, dusky or purplish, the lips bluish, and the dropsy extends to the abdomen or thorax. The unremitting wear of organic disease often produces, as Corvisart has observed, a peculiar anxious contracted expression of countenance.

The *præcordial region* in functional affections is uniformly natural; while in organic enlargement, on close inspection, there can generally be detected more or less *bulging*.

The *purring tremor*, (*fremissement cataire*), a sensation to the hand like the purring of a cat, is felt only in organic disease, commonly of the mitral valve. According to Skoda, in mitral disease, too, the *second sound* of the heart is always accented and prolonged.

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* Valleix.

A wavy, jerking, collapsing *pulse*, unlike any other, is found in free regurgitation, or what the Germans term "*insufficiency*" of the aortic valves.

The sounds of the heart, in functional affections, are unchanged, or a trifle clearer; in organic hypertrophy, the first sound is duller, and in dilatation it is sharper, and like the second sound.*

To contrast them better, we have arranged a few of the more important tests in opposite columns in the following table, suggested in part by the contents of similar ones in the great work of Canstatt,† and the excellent paper by Dr. Hughes, on *Anæmic Murmurs and their Diagnosis* in *Guy's Hospital Reports.*

In Functional Heart Affections:	*In Organic Heart Disease:*
Præcordial dullness on percussion is not permanently *extended*, nor the *apex displaced.*	*Præcordial dullness* in enlargement is permanently *extended*, and the *apex crowded* to the *left*.
The *impulse* in *plethora* is strong *bounding;* in *irritation*, smart *knocking;* in both, widely jarring; in *debility*, small, soft *tapping*, sometimes *hurried.*	The *impulse* in *hypertrophy* is strong, broad *heaving;* in *dilatation*, weak, wide *flapping;* in both together, strong, large *bulging;* in all with *extended dullness.*
The whole *movement* of the heart is more *elastic*, *light*, or *easy.*	The whole *movement* of the heart is more *dead*, *clumsy*, or *labored.*
Functional murmurs are *soft blowing*, *aortic* and *systolic;* are from *anæmia*, and usually with the venous hum in the neck.	*Organic murmurs* are *harsher*, *louder*, often *grating*, *aortic* or *mitral*, *systolic* or *diastolic*, or both, and very rarely with *anæmia* or venous hum.
Functional is more *paroxysmal.*	Organic is more *uniform.*
Active exercise is often well borne, and benefits.	Active exercise always *aggravates.*
The *causes* are mainly *dyspepsia*, *anæmia*, *plethora*, *nervous or generative disease.*	The most common *causes* are, first, *rheumatism;* and next, Bright's disease.

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* Hope.

† Pathologie und Therapie.

Prognosis. The result, in functional cardiac difficulties, is almost always favorable. We can call to mind some instances of females with exhausting discharges, or prostrated by grief or despair, in whom functional debility of the heart has been finally succeeded by stretching of its walls and incurable dilatation.

Some have thus literally died of a broken heart. On this account, in cases of anæmia, or great weakness, it is desirable to lose no time in strengthening the debilitated organ.

Causes. A large majority of the cases of functional disturbance of the heart are connected directly or remotely with affections of the digestive or generative organs. Having to notice the principal causes individually in our future classification and description, we here give, with perhaps a little repetition and latitude, the following simple enumeration.

Sanguineous:—Plethora, revulsion from cold, pregnancy, pulmonary congestion, hemorrhoids; irritation or exhaustion from hemorrhage, chlorosis, excessive lactation, &c.

Muscular:—Rowing, gymnastics, running, dancing, or violent singing.

Nervous:—Neuralgia, spinal irritation, hysteria.

Mental:—Exciting, anger, or joy; depressing, fear, sorrow, despair; exhausting, excessive study.

Digestive:—Disordered stomach or liver, tape-worm, gout, diarrhœa.

Generative:—Uterine disease, menorrhagia, amenorrhea, dysmenorrhœa, leucorrhœa, excessive indulgence, masturbation, frequent nocturnal emissions, or spermatorrhœa.

Poisonous or irritative:—Tobacco, coffee, green tea, lead, marsh-miasma.

Pathology. One of three morbid conditions seems usually to predominate in functional cardiac derangement:

Congestion, Irritation or Debility. Irritation in other parts of the system often precedes congestion, as it does inflammation; but the heart is an hydraulic machine, and its congestions, especially of this kind, commonly depend upon causes independent of the organ; are at first sudden and mostly mechanical. Let the heart be overloaded for a time with rich, stimulating blood, and congestion may give rise to irritation; and when, at last, its nervous energy is exhausted, this again may terminate in the third stage, or *debility*. Or, again, two of these may be blended. For practical purposes, we think it will simplify our views to have a constant reference to one of these conditions, and we have therefore made them the basis of what we trust is a simple and natural arrangement of the whole subject.

Classification. In introducing new terms, and what may be deemed innovations, we may be indulged perhaps in a word of explanation. Our object has been to *display best* what seemed *most important.* To do this, much depends on the arrangement. We learn far more of the family relations and practical uses of plants, for instance, from what is termed the "natural system," than the more showy one of Linnæus. So in the treatment of disease, the "natural order" is often first to regard effects; and, secondly, their causes. Suppose, for example, twenty persons fall sick from exposure to intense cold, and five get rheumatism, and five peritonitis, and five pleurisy, and the last five are frostbitten, would any sane man treat all alike, because all arose from the same cause? We would treat its pathological *effects.* So, in different constitutions, mental excitement, as we shall see, may cause either cardiac *congestion*, *irritation*, or *debility;* or other agents may produce these same conditions; and all we propose to do, is to make these last *primary*, and their causes *secondary.*

Some may object, again, to our including affections mainly located in other organs; and, though their most troublesome manifestations are through the heart, may regard these as mere *symptoms.* Such would banish "*dropsy*" from every text-book, for this is commonly a mere "*symptom*" of disease of the kidney, heart, or peritoneum. We prefer to look at diseases and symptoms in every possible combination and light. Classification is only a convenient framework to display the picture, to be shifted or amended as occasion may require.

CLASSIFICATION.

I.

- Congestion of the heart.
  - Plethoric,
  - Over-active,
  - Revulsive,
  - Emotional.

II.

- Irritation of the heart.
  - Nervous,
  - Hysterical,
  - Mental,
  - Anæmic,
  - Dyspeptic,
  - Uterine,
  - Spermatorrhœal.

III.

- Debility of the heart.
  - Nervous,
  - Hysterical,
  - Emotional,
  - Anæmic,
  - Dyspeptic,
  - Uterine,
  - Spermatorrhœal.

I. CONGESTION OF THE HEART. This is characterized by a strong, *bounding impulse*, unnaturally jarring the chest, without the extended *dullness* of organic enlargement, and frequently without corresponding force in the *pulse* at the wrist, with præcordial *oppression* or pain, and irregular *palpitation*.

Cardiac Congestion from Plethora. This form usually occurs in adults of full sedentary habits, or sanguine growing youths. Dr. Latham has given a graphic description of it under the name of "Mock Hypertrophy." "I am well aware," says Dr. L., "that there is a mock hypertrophy of the heart, bearing so close a resemblance to the true, that I should find no fault with you for being taken in by the counterfeit. There may be violent impulse of the heart felt not only in the præcordial region, but in every part of the chest upon which you lay your hand. Here may be pain in the heart, and pain and throbbing in the head; and all these may be never absent, and often aggravated, from time to time, by accidental circumstances; and they may continue, from first to last, for several months, or for several years, and produce in the meanwhile an incapacity for all useful exertion, both mental and bodily. All these may be, and yet there be no hypertrophy.

"When the impulse of the heart is excessive, and, at the same time, the sounds are obtuse, muffled, and indistinct, and the præcordial region presents a larger space than natural, which is dull to percussion, then the signs of hypertrophy are complete. But when the impulse of the heart is in excess, and, at the same time, its sounds are as loud and clear as ever, or louder and clearer still, and the whole præcordial region is quite resonant to percussion, save the small space naturally dull, then the signs of hypertrophy are incomplete."

Contrary to some others, Dr. L. believes the cure of real organic hypertrophy hopeless; while he has "treated successfully" the mock imitation described, "in a hundred instances."

This form is occasionally found among clerks and merchants of full habits, or sanguine youths from the country, who surfeit themselves with rich food, and take little exercise; thus overloading the stomach and stimulating the heart with rich blood, they sometimes complain of flatulence, indigestion, and pain in the head, as well as alarming palpitation.

Cardiac Congestion—Plethora—Recovery. A clerk, strong, athletic, married, and sedentary, consulted me a few months since for uneasiness, irregular palpitation, and strong, bounding, jarring impulse of a heart otherwise natural, attended with occasional indigestion and constipation, and constant fullness and pain in the head, *with a bright congested eye.* He was ordered a free purgative of compound extract colocynth with blue mass, to eat meat but sparingly but once a day, to rise early, and use cold sponging with hard frictions, and, avoiding the heat, to walk several miles daily. These measures having only afforded temporary relief, on a return of symptoms nearly apoplectic, they were further aided by a full bleeding from the arm, and a powerful hydragogue cathartic; and by the most careful attention to spare diet and free exercise, in a few weeks he quite recovered.

Congestion of the heart from over-exertion. As we know, from their interlacing with the bloodvessels, the muscles in strong exestion must greatly increase the force of the circulation. Some ingenious explanations of this are given by Dr. Wardrop, the best writer we have seen on the subject of cardiac congestion, under the head of what he terms the *musculo-cardiac function.* Simply running a few yards, or any strong effort, in health, will, as we know, bring on palpitation. And in the affection in question, from the frequency or violence of the exertion, this overaction of the heart becomes habitual. The symptoms are much the same as in plethora. Sanguine growing youths, fond of gymnastics, and especially rowing, are the most frequent subjects.

Dr. Addison, in his lectures at Guy's, is in the habit of cautioning the students against the rowing matches on the Thames. A fine lad of seventeen, excessively fond of rowing, was brought to me while stopping with a friend on the shores of a lake, with suspected organic disease, having a violent, knocking impulse. He was duly freed from the imputation, and directed to be less ambitious in boating and climbing the neighboring mountains. Indeed, youths generally outgrow this development, if left alone. Occasionally, it ceases suddenly. Dr. Latham mentions a young officer whose heart ceased to be unruly at the battle of Navarino. Almost any kind of severe exercise may be the first exciting cause. A servant-maid, from carrying coals up stairs, a chorus singer in St. Paul's, and a French danseuse, were severally more or less disabled for a length of time by severe palpitation, from violent efforts in their different vocations.

CASE.—A jeweller, aged twenty, short, stout, ruddy, and temperate, having practiced gymnastics, and particularly climbing, and suspending himself by the arms, consulted me a few months since for strong, jarring impulse, distressing fits of palpitation, and constant headache. He was ordered a free alterative purgative, to be followed by twenty drops of equal parts of the tincture of digitalis and hyoscyamus in water, three times a day, with the local application of croton oil, followed by belladonna; to eat sparingly of meat at dinner alone, to avoid violent exercise, and to walk much, moderately. He soon recovered.

A corpulent, healthy engraver, having run violently to overtake a coach, brought on severe palpitation of the heart, exhaustion, and difficult breathing, which remained for several days, and "were not relieved, until after blood-letting, leeches, and antimonials had been employed."*

Congestion of the heart from revulsion.—Any local agency which disturbs the equilibrium, and causes special determination of blood, may be termed *revulsive.* A moment's reflection on the number and size of the superficial veins, and the quantity of the blood they naturally contain, will show us the importance of the circulation on the surface of the body. Thus we aid this and relieve internal organs by sinapisms, pediluvia and diaphoretics.

Cold, by an opposite action, drives the blood from the surface, and overloads the internal organs. In a large hospital of this city, it is stated they can tell a very cold day in winter by the extra number of cases of apoplexy. On the principle of relieving this internal congestion, Dr. MacIntosh bled during the chill of ague. So, too, we forbid sudden cold baths to patients liable to apoplexy or disease of the heart. They have sometimes produced immediate death, or troublesome palpitation.

A gouty gentleman, after sea-bathing, had pain, palpitation, and *violent impulse of the heart, with small pulse*, for months, which were at last completely relieved by antimonials.

Cold substances taken into the stomach may derange the circulation. A case is quoted of a strong, healthy young man, heated with mowing, who drank freely of cold water, and was suddenly prostrated, with difficult breathing, loss of vision, and cold extremities, while, for the next three days, notwithstanding the attempt to relieve congestion by small bleedings, warm baths, and saline purgatives, there were *over-action, and intermission of the heart*, with an oppressed *pulse*, ranging *from* 14 *to* 50 *beats per minute.*—He slowly improved for the next four days, and at the end of the week the natural circulation was restored.†

Hot food, rapidly swallowed, has produced like effects. A young man, after eating a very hot potatoe, became insensible, finally rallied, and for nine years after suffered from pain, palpitation and *forcible impulse of the heart, with a weak pulse*, frequent epistaxis, and cold extremities. He was at length greatly relieved by several moderate leechings over the heart, with small doses of the tartrate of antimony, followed by preparations of iron.*

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* Wardrop.

† Am. Med. Repository.

Revulsion may be occasioned by *mechanical pressure.* Thus, the French conscripts are said to produce a very good imitation of disease of the heart, by tying a ligature tightly round the neck or arms. Mr. Hyslop found, that by grasping firmly the two arms, he greatly assisted the recovery of a lady from fainting; and, on making the experiment of ligatures upon his own arms, he could increase the pulsations of the heart ten beats in a minute.

Pregnancy, by pressure on the abdominal vessels, as well as by plethora, sometimes occasions distressing palpitation. A young married lady, in the fifth month of her first pregnancy, was attacked with a violent beating of the heart, and an aortic thrill, supposed to be aneurismal. After great suffering and dropsical symptoms, unrelieved by bleeding, digitalis and other remedies, she recovered completely after natural labor.†

Suppression of habitual discharges, such as hemorrhoids or the menstrual flow, will sometimes by revulsion produce palpitation and congestion of the heart. A stout, ruddy country girl, with suppressed menses, who had "tumultuous palpitation," with the impulse so strong as to "raise the head," was restored to health by general bleeding, followed by purgatives, low diet, and cupping over the loins.‡

Pulmonary congestion may react upon the heart. The lungs, as we know, act partly like an immense sponge, filling the thorax, both in receiving and returning the blood. *Inspiration*, by expansion, draws in *venous blood*, while *expiration* by pressure expels *arterial.* Thus the mechanical effect of artificial respiration is to unload the heart of the stillborn infant; and, in this way, Sir B. Brodie roused the congested hearts of animals paralyzed by poison. John Hunter, it is said, once saved his own life, in nearly fatal syncope, from organic disease, by continual violent expiratory efforts. Some interesting facts on this subject may be found in the excellent works of Dr. Wardrop and Dr. Calthrop Williams. Congestion of the lungs has a tendency to overload the heart, and so palpitation and violent impulse are often accompanied by cough and difficult breathing.

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* Wardrop. † Dr. Robert Lee. ‡ Dr. Calthrop Williams.

A lady, aged 28, kept awake, and sitting up in bed several nights, with a severe cough, could hear as well as feel the violent palpitation and impulse of the heart, especially on the slightest exertion. By small leechings to the chest, repeated every four days, and a dose of James' powder every night, all the symptoms were subdued.*

Emotional congestion of the heart. Every one has felt his own heart beat violently from mental emotion. Corvisart believed that affections of the heart in his time greatly increased during the reign of terror, and the exciting periods of the French Revolution. The term "broken-hearted," is unfortunately not merely figurative. From the paleness of the face, in terror or despair, we know that the blood has retreated *somewhere.* Shakspeare, the great naturalist of poets, tells us *where:*

> "Oft have I seen a timely parted ghost
> Of ashy semblance, meagre, pale, and bloodless,—
> *Being all descended to the laboring heart.*"

There is, however, more than mere revulsion. The heart receives besides a nervous *stimulus or shock.* This kind of congestion forms, then, a separate item, and an appropriate link to the next group of functional heart affections, or those depending on *irritation.*

A mother, still broken-hearted at the sudden loss of her child, a year previous, complained of difficult breathing, and a *violent impulse of the heart with a small pulse.* By means of alternate leechings to the chest and feet, with antimonials and sedatives, she at length completely recovered.*

II. IRRITATION OF THE HEART. Cardiac irritation is characterized by a smart knocking *impulse,* less *forcible* and *jarring* than that of congestion, but above that of health; more *variable* with excitement, and corresponding more uniformly with the radial *pulse.*

It arises principally from nervous derangement, impoverished blood, or morbid sympathy, with disorders of the digestive or generative systems.

Nervous Irritation of the Heart.—Some persons, from birth, have a nervous system unduly developed, and, in infancy are specially liable to convulsions; in childhood, to chorea; and in adult life, to hysteria or nervous palpitation of the heart. Some interesting observations on this subject will be found in a paper by M. Gintrac, on *Surexcitation Nerveuse.*[*]

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* Dr. Wardrop.

The Irritable Heart.—Sometimes this exaltation of nervous sensibility is confined to a single organ, in the form of those curious obstinate affections described by Sir A. Cooper, Dr. Gooch, and thers, under the name, "Irritable Breast," "Uterus, Testis," &c.

In the following example no neighboring sources of irritation could be detected. The morbid nervous excitability was exceedingly intractable, and confined to the heart alone, producing painful palpitation and a smart *rapping impulse*, and we venture from analogy to apply the above term.

Irritable Heart.—Incurable.—A female hat-presser, aged 35, unmarried, tall, muscular, otherwise apparently healthy, though suffering from occasional want and poverty, in a damp basement,—consulted me in 1848 for "nervous palpitation" of ten years' duration, and for which she bore the marks of counter-irritation, while under ineffectual treatment some years previous in Edinburgh. The heart was natural in size and sounds, with a little præcordial tenderness to the finger, *painful palpitation*, more or less constant, increased by excitement, and accompanied by a *smart knocking impulse.* Under the use of preparations of iron, Fowler's solution, in combination, or otherwise, with vegetable tonics, digitalis, hyoscyamus, conium, valerian, with mild counter-irritation, followed by the external application of belladonna, she continued for two years with slight palliation at times, but no permanent improvement, till at last she grew discouraged and discontinued treatment. A year or so after, she died somewhat suddenly of pneumonia, without affording the desirable opportunity of a post-mortem.

Spinal Irritation.—We sincerely endorse the opinion of Professor Romberg, of Berlin, in his great work on nervous diseases, that this matter has been vastly over-estimated. Most nervous or hysterical patients, and especially those subject to palpitation, have a little sensitiveness, on pressing over the spine of some of the dorsal vertebræ between the shoulders, which some have thus magnified with an alarming name. It is ordinarily, we think, simply a slight test of an irritable nervous system. When much affected by atmospheric changes, as Dr. Wood, of Philadelphia, has observed, it may sometimes be rheumatic. For a more serious view of the matter, we refer to the works of Teale and others. In some instances, where perhaps, from scrofulous irritation or some injury, the spinal tenderness has been more deep-seated and constant, palpitation and other unpleasant symptoms have certainly been relieved by leeching, cupping, or irritation near the spine. Dr. Swett, in his excellent work, mentions a case of functional disturbance of the heart, cured by an issue near a tender vertebra, followed by tonics.

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[*] Mem. de l'Academie Royale.

Irritating Nervines or *Narcotics* in common use, as articles of luxury, have the effect, in certain habits, of deranging the action of the heart; such are green tea and strong coffee. A case is mentioned of a gentleman, who could, at any time, by taking a cup of coffee, produce palpitation and bleeding from the nose. By far the most noxious luxury to the dyspeptic, or nervous, is tobacco. The essential oil is said to poison by paralyzing the heart. A Mexican minister, some years since, summoned Dr. Alexander H. Stevens, of this city, to Washington, for supposed organic disease of the heart. A cure was performed by emptying his excellency's snuff box. We shall illustrate further in a moment.

Neuralgia of the Heart.—Such has been the term given by some to the very rare cases of angina pectoris, which the researches of modern pathology do not show to be connected with ossification or other form of organic change.*

Irritation of the Heart, Angina Pectoris, from the use of Tobacco.—A highly intelligent friend, aged sixty-five, stout, ruddy, early married, temperate, managing actively his large business, after premising that he commenced chewing tobacco at seventeen, swallowing the juice, as is sometimes customary, "to prevent injuring his lungs from constant spitting,"—and that years after he suffered from a knawing, capricious appetite, nausea, vomiting of meals, emaciation, nervousness, and *palpitation of the heart*, dictated to me quietly at his desk, recently, the following story:

"Seven years thus miserably passed, when, one day after dinner, I was suddenly seized with intense pain in the chest, gasping for breath, and a sensation as if *a crowbar were pressed tightly from the right breast to the left, till it came and twisted in a knot round the heart, which now stopped deathly still for a minute, and then leaped like a dozen frogs*. After two hours of death-like suffering, the attack ceased, and I found that ever after my heart *missed every fourth beat*. My physician said that I had organic disease of the heart—must die suddenly—and need only take a little brandy for the painful paroxysms, and I soon found it the only thing that gave them any relief. For the next twenty-seven years I continued to suffer milder attacks like the above, lasting from one to several minutes, sometimes as often as two or three times a day or night; and to be sickly-looking, thin, and pale as a ghost. Simply from revolting at the idea of being a slave to *one vile habit alone*, and without dreaming of the suffering it had cost me, after *thirty-three years' use*, I one day threw away tobacco forever. Words cannot describe my suffering and desire for a time. I was reminded of the Indian, who, next to all the rum in the world, wanted all the tobacco. But my firm will conquered. In a month my paroxysms nearly ceased, and soon after left entirely. I was directly a new man, and grew stout and hale, as you see. With the exception of a little asthmatic breathing, in close rooms and the like, for nearly twenty years since I have enjoyed excellent health."

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* See Dr. Walshe.

On making, by his kind permission, a cursory examination, I found the heart seemingly healthy in size and structure, only *irregular*, intermitting still at every fourth pulsation.

Hysterical Irritation of the Heart.—It is well known that hysteria often imitates, successfully, dangerous inflammations and other ills, and among the rest, disease of the heart.

Hysterical Palpitation—Leucorrhœa—Recovery.—A widow lady, aged twenty-five, sanguine, nervous, sedentary, and very literary, after a series of hysterical paroxysms from sudden shock, requested my attention in 1850 to "disease of the heart," under which, she stated, medical and other friends thought her laboring for months previous. The least excitement would give rise to distressing palpitation, accompanied by a *smart knocking impulse*. There was some *leucorrhœa*, with pain in the loins.

Under the use of various preparations of iron, with bitter tonics and sedatives; belladonna to the præcordial region; a mixture of the tinctures of valerian and hyoscyamus for the fits of palpitation; with morning vaginal injections, of eight grains each, of extract of conium and tannic acid, in a tumbler of water, followed by evening injections with cold water, and regular long walks in the cool part of the day, in a few weeks she was quite restored to health.

Mental Irritation of the Heart.—This is exemplified in the tendency of all nations, figuratively or otherwise, to speak of the heart as the seat of the passions. Laughing, joy or anger accelerates, while grief or fear retards the circulation. The long, deep inspirations of yawning, sighing, and sobbing are instinctive, and mechanically relieve a congested or "heavy" heart. Doubtless from the mental shock affecting the heart, the winner of a rich prize in a lottery, a feeble Emperor of Morocco in gaining a desperate victory, and a fond Russian mother in the restoration of her captive son, all died of the joyful news. John Hunter expired of disease of the heart in a fit of anger. The wife of a farmer, long harrassed with the fear of incendiaries; a nurse, from continued anxious watching; and a lady, tortured for a week with danger of shipwreck; each suffered afterwards from protracted disorder of the heart! A patient of the writer, disconsolate at the loss of her broken-hearted daughter, whose case will be mentioned, died of dilatation of the heart a few months afterwards.

Exhausting Mental Application is the frequent cause of irritation and palpitation of the heart. A friend, distinguished as a divine and author, aged about 42, moderately full, after several years' severe application, in which he habitually studied till three or four o'clock in the morning, was at last greatly incapacitated for a long period by irritable palpitation of the heart. He was most relieved by a succession of blisters, the size of a twenty-five cent piece, over the heart, and rest, with tonics, and at length nearly restored by a tour in Europe, mental relaxation and more generous diet. Any great mental effort, however, still exhausts his stock of nervous energy, and brings on irritability of the heart.

A celebrated Methodist clergyman, of middle age,—as a Western medical friend recently informed me, having,—by protracted and severe studies, brought on irregularity of the heart, was sentenced to suspension, and patient waiting for sudden death from organic disease, by the most celebrated medical professors of a Western school. In his retirement, he was surprised by the opinion of a shrewd country physician, that it was merely functional, and that he might with proper treatment gradually resume active labor; and finding, by a little experience, the last opinion correct, in a few months after he accepted the highest office in his church. He has since labored several years as Bishop.

It would seem as if the study of certain diseases sometimes favored their real or imaginary development. Laennec died of pthisis, and Corvisart of disease of the heart. When the celebrated Professor Frank was preparing his lectures on disease of the heart at Pavia, his own heart became so disturbed that he was obliged to rest for a time.* Rumor says that no less than five of the Professors in one of the medical colleges of this city have unjustly suspected their hearts.

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* Romberg.

Medical students exhausted by a winter session are apt to be special subjects of real or fancied irregularity of the heart. We have frequently to assure our young studious friends that their hearts are certainly in the right place, and gravely prescribe a vacation. Bouillaud slyly alludes to this as a distinct species, under the name of "*Maladie du Cœur des Etudiants.*"

We remember an early friend who, with the writer and two or three other students, gravely flourished the stethoscope over each other as a sort of society of mutual observation. We fancy we see still the doleful expression of his pale, handsome face, at the spring of the gushing cups over his intermitting rebellious heart. He soon after grew stout and forgot his heart in a successful country practice. A young friend, attending our Lectures on Diseases of the Chest last winter, fel[illegible]n unusual knocking of his heart after ascending the long college stairs, and required several examinations to satisfy him. An early fellow-student (who happened to come to light again after illness and a hard session), in mounting to one of the "sky apartments" of a Parisian hotel, used frequently in alarm to call the writer to examine his palpitating irritable heart, and recovered under the somewhat selfish prescription of a partially pedestrian tour with his adviser to the south.

Anemic Irritation of the Heart. The reaction from sudden hemorrhage or excessive venesection, so well described by Marshall Hall, is sometimes characterized by *palpitation*, *distress*, *a smart knocking impulse of the heart* and bellows murmur, with a quick jerking and occasionally intermittent pulse, thrill of the arteries, nervous panting and sense of wildness and pain in the head.

In the case of a middle-aged sanguine, nervous lady, under our care in 1849, who had been very largely bled in severe puerperal peritonitis, this mingling of heart and head symptoms suddenly assumed a very perplexing character; and with serious misgivings, as to whether the lancet was not farther required, she was fortunately partially narcotized with opiates, and the palpitation and distress at the heart soon ceased.

A boarding mistress is mentioned by Morgani, who, for "palpitation of the heart," was bled, with temporary relief, followed by great aggravation. The "breast seemed at every stroke to be lifted up," and the venesections were repeated, till by degrees she was, as the event proved, literally bled to death; for, on the post-mortem examination, not the slightest change in the heart or viscera could be detected. "Everything was entire, sound and natural."

In Chlorosis, especially in the more excitable of its delicate subjects, or in the earlier stages, with the blanched skin and dark areola of the eye, we have sometimes the irregular action, smart knocking impulse and bellows murmur of an irritable heart. Palpitation, indeed, was enumerated as one of the symptoms of "the green sickness" by Sydenham.

Moderate Chlorosis—Palpitation—Tedious Recovery.—A lady, aged 25; moderately full, but pale as a statue, with blanched lips, dark areolæ of the eye, very sedentary, in deep domestic affliction, with scanty menstruation, consulted me in 1849, in much alarm, for distressing palpitation, and a smart knocking impulse of the heart, diminished by rest, and increased by excitement, with an intermittent neuralgic pain along the right of the sternum, and *without bellows murmur.* After the persevering use of various preparations of iron, with vegetable bitters, mild sedatives, and the local application of belladonna, with regular walking and generous diet for several months, she slowly recovered her health.

Dyspeptic Irritation of the Heart.—This exceedingly common form doubtless depends on what is termed *sympathy*, and this latter again is certainly somewhat mysterious. Something is explained by Marshall Hall's theory of reflex, nervous communication, as well as by considering the connection of the great sympathetic system of nerves. The facts are quite evident. An inflamed kidney, a pregnant uterus, or a concussed brain, will produce a sick stomach, and none of these can suffer but the heart and its pulse respond.

Dyspeptic Irritation of the Heart—Recovery.—A gardener, aged 50, muscular, unemployed, and melancholy, was admitted under our care at the New-York Dispensary, in August last, with loss of appetite, flatulence, bitter taste, tongue clean and red at the tip, tenderness of the epigastrium, constipation, high-colored urine, pulse 65 and soft, with *palpitation* and a *smart knocking impulse* of a heart otherwise natural. He was ordered a mild alterative purgative, to be followed by five drops of the tincture of nux vomica, in water, three times a day; to avoid indigestible food, coffee and tobacco; to sponge with cold water in the morning, and follow with friction; to walk five miles daily; and in less than a month he was discharged cured.

Congestion or Torpor of the Liver is frequently intimately associated with dyspeptic irritation of the heart. Dr. Hope gives a very interesting case of a lady aged forty, stout, with intermission, palpitation and oppression of a heart otherwise natural, and with constipation, succeeded by bilious stools and *enlarged liver.* Spare diet, and "active mercurial purgatives, employed almost without intermission for two months, brought off an incredible quantity of dark green and deep orange bile." Suspension of these aggravated the symptoms. In three months she enjoyed "perfect health."

Hepatic Torpor—Indigestion—Severe Palpitation—Improvement.—A merchant, aged 55, spare, having suffered from dyspepsia, and the *fear* of organic heart disease for many years, consulted me in 1850, for superficial pain, palpitation and a smart knocking impulse of the heart, otherwise normal, with loss of appetite, flatulence, despondency, constipation, clayey stools, bilious urine, shooting shoulder pains, jaundiced dry skin, with occasional turns of night mare, and terrible headache. With an occasional mild mercurial purgative,—five grains each of the iodide of potassium, with the extract of taraxacum, in solution, three times a day,—followed by iron, with mild sedatives; small doses of the tincture of nux vomica; the use of equal parts of soap liniment and tincture of belladonna over the heart; careful diet, brown bread, and especially *recreation in the country, and gardening,*—in a few months he materially improved.

Tape-worm has sometimes produced dyspepsia with serious disturbance of the heart. Dr. Calthrop Williams mentions the case of a lady, aged twenty-two, with voracious appetite, fixed *pain in the left hypochondrium,* restless nights, febrile attacks, syncope, alarming cerebral symptoms, with *violent palpitation,* especially before eating—who, by turpentine and other purgatives (producing the voidance of a tape-worm), and a subsequent tonic course, was perfectly cured.

Gout is, among our active population, comparatively a rare disease, and among the very few cases we have known, we have not happened to meet any decided instances of functional disturbance of the heart. In older and more luxurious states of society, the case is different. Three of the examples of dyspeptic palpitation mentioned by Abercombie were evidently gouty. One gentleman, aged forty-eight, after suffering greatly from indigestion, and daily paroxysms of distressing palpitation, was at last cured as by a charm, by so small a quantity as twenty drops of the wine of colchicum, in divided doses, daily for a month.

Uterine Irritation of the Heart.—Such a phrase may possibly seem at first inconsistent, and excite a smile; but if that smile make the morbid sympathy between the uterus and the heart remembered, our purpose in coining the term is accomplished. Dr. Williams uses the short, expressive phrase "uterine palpitation." Every variety of menstrual irregularity, as well as structural disease of the uterus itself, may occasion functional disorder of the heart. Want of space must limit our examples.

Uterine Disease—Palpitation—Recovery.—A lady, aged 26, having four months previously suffered much in an instrumental first labor, called my attention, in 1850, to palpitation, uneasiness, and a smart, knocking impulse of a heart otherwise healthy, accompanied by dragging pains about the loins. On examination with the speculum, the vagina was slightly smeared with leucorrhœal discharge, and the os uteri was prolapsed, swollen, tender, and excoriated. Under the use of occasional applications, with a camel's-hair brush, of a solution of the nitrate of silver of 90 grains to the ounce; vaginal injections of a solution of extract of conium and tannin, alternated with cold water; twenty drops of a mixture of equal parts of the muriated tincture of iron and the tincture of hyoscyamus three times a day in a wineglass of sweetened water, porter and beefsteak, she gradually recovered her health.

Dysmenorrhœa—Nervous Palpitation—Recovery.—A lady, aged 24, slender, stooped, strumous, having the remains of former spinal irritation, and having just weaned her firstborn, consulted me in 1843 for smart nervous palpitation and difficult, painful menstruation, declared to be "like labor." By full doses of Dover's powder and camphor in pills for the monthly paroxysms, followed in the intervals by the daily administration of the tincture of guiac, after the plan of Dr. Dewees; and subsequently, the still more successful use of a solution of the iodide of iron, in combination with the tincture of hyoscyamus; she regained her usual rather feeble health, and soon after became pregnant.

Irritation of the Heart from Spermatorrhœa in the male is sometimes present. We remember two cases of this kind. One was a young man, kindly referred by a medical friend to one of our Chest Cliniques, in which there was a smart, knocking impulse of the heart; but he unfortunately escaped us both, and did not return. Most commonly, however, it produces *cardiac debility.*

III. Debility of the Heart.—This is characterized by a *soft, tapping impulse, sometimes hurried;* and a *tendency to fainting.* It is produced by any agency which, by general depression of the nervous system, changes in the blood, by depraved nutrition, weakening discharges, or the morbid sympathy with other organs, exhausts the nervous energy of the heart. We were strongly inclined at first, therefore, to adopt the term *enervation of the heart,* instead of the more familiar one we have chosen.

Cardiac Debility from Nervous Disorder.—Romberg has classed nervous diseases with a loss of power under the general term Anæsthesia. On this principle, certain poisons, as marsh miasma, lead, and tobacco, may be termed slow anæsthetics.

Enervation of the Heart from Marsh Miasma—Anxiety—Improvement.—A bricklayer, aged 28, tall, slender, bilious-looking, having previously suffered from ague in a miasmatic district, consulted us in 1844 for *palpitation, with feeble tapping impulse* of the heart, else normal, accompanied by a *tendency to faint*, even with the slight exertion of raising a brick; with rather feeble pulse and moderate appetite; spleen and liver natural in size; some spinal sensitiveness between the shoulders; and much *mental suffering*, from constant harassing of committees from an incredulous beneficiary society. He was ordered preparations of iron, with quinine, aloes, and bitters; mild counter-irritation and belladonna; cold sponging and friction; with diligent walking and total abstinence from cigars; and in a few weeks materially improved, but, against my friendly protest, was soon cut off by his society, and sent to his friends in the country.

Debility of the Heart from Lead-poisoning—Recovery.—A laborer, aged 34, muscular, having worked in a white-lead manufactory a few weeks, was admitted under our care in the New-York Dispensary, early in October last, for palpitation, difficult breathing, uneasiness and *faintness* on exertion, with *soft tapping impulse of the heart*, otherwise normal, with the *violet lead streak* of the gums, trembling weakness and numbness of the limbs, pulse 74, *weak;* loss of appetite, nausea, tenderness of the epigastrium, and constipation. He never had rheumatism; used no tobacco; indulged in no excess. Partially on the plan of M. Melsens in lead disease, he was ordered ten grains of the iodide of potassium in solution, with a few drops of the tincture of nux vomica three times a day; and subsequently these were aided by a blister, the size of a cent over the heart, dressed with belladonna ointment, with the effect of gradually relieving all the symptoms, and he left convalescent at the end of a month.

Weak Heart from Tobacco.—A cork-cutter aged 21 was recently admitted under our care in the N. Y. Dispensary, with faintness on exertion, palpitation and soft tapping impulse of the heart, from the excessive use of tobacco, who was cured by abstinence, walking, and the use of small doses of tincture of nux vomica, and latterly of the *acetated solution of strychnia.*

Hysterical Debility of the Heart.—Those instances of nervous females in which there is catalepsy, or fainting for hours, with a scarcely perceptible action of the heart, are really cases of simply hysterical debility of the heart.

We suspect too that the favorite subjects for so-named "mesmeric experiments" have a weakness in that quarter.

Emotional Debility of the Heart.—It is scarcely necessary to add to our remarks upon the influence of depressing passions. The following cases explain themselves:

Weakness of the Heart—Domestic Grief—Much Improvement.—A poor women, aged 32, slender, mother of two children, fretting from want, and the long absence of her husband, was admitted under my care in January last, at the New-York Dispensary, for "fainting turns," *palpitation*, *feeble*, *velvety impulse* of the heart, else regular, with slight dyspeptic symptoms. Under the use of mild counter-irritation over the heart, with a mixture of croton oil and sulphuric ether; and twenty drops, three times a day in a wineglass of sweetened water, of a mixture of one ounce each of the tincture of hyoscyamus with the muriated tincture of iron to a drachm of the tincture of nux vomica; with moderate walking, in a few weeks she greatly improved.

Cardiac Debility—Grief—Amenorrhœa—Phthisis.—A young lady, aged 19, English, fair, delicate, frequently sighing, having been forcibly separated from her lover by parental authority, on emigrating, consulted me in 1845 for *faintness on slight exertion*, *palpitation and fluttering*, *velvety impulse of the heart*, otherwise natural, accompanied by suppression of menstruation. Silent and sad,

> "She never told her love,
> But let concealment, like a worm i' the bud,
> Feed on her damask cheek."

Suspecting something from her manner, I learned her story from a sister, with the addition, that her friends were often obliged to watch her as she wandered on the beach, broken-hearted, to gaze on the sea. Chalybeates and the usual restoratives were tried in vain. A few months after, with a suspicious cough, came the signs of tubercular softening; and, in the wreck of beauty we sometimes see, with the alabaster forehead, the pearly eye, and hectic flush of the cheek, she gently wasted away with consumption.

Anæmic Debility of the Heart.—After reaction from loss of blood by hemorrhage, or depraved nutrition, there naturally follows exhaustion.

Weak Heart—Chlorosis—Bellows Murmur.—Bruit de Diable. Recovery.—A lady, aged 25, married, slight, pale, sedentary, consulted me in July, 1852, for palpitation, uneasiness, *faintness on exertion, soft, variable, aortic bellows murmur*, with the first sound, and weak tapping impulse of a heart, else natural; with venous hum in the jugulars, and irregular scanty menstruation. After the use of preparations of iron, with mild sedatives, exercise, and generous diet for a few weeks, she was sent a month into the country, and returned quite well.

Dyspeptic Debility of the Heart.—A majority of the purely dyspeptic examples of cardiac functional disturbance come under the head of "*irritation.*" It is only in the *worn-out* cases that we have debility of the heart.

Debility of the Heart—Frequent Fainting—Dyspepsia—Improvement.—A merchant, aged 32, medium, pale, sedentary, married, eight years dyspeptic, consulted me in 1851 for palpitation, occasional turns of irregular intermission of the heart, with soft tapping *impulse, sometimes hurried*, and *frequent fainting*, accompanied by capricious appetite, "belching," flatulence, uneasiness, and sensation of splashing of liquids in the stomach—for which he had received great variety of treatment on both sides of the Atlantic. An oyster supper, a social evening, any special indulgence, or an exciting day's work expended the nervous energy of his heart, and aggravated all his symptoms. The faintness, or "pitching turns" as he termed them, greatly alarmed him, and were generally mere momentary loss of power, and staggering along the street or about his business. Occasionally they laid him powerless and pale on the sofa for five or ten minutes. Sometimes they were absent for days, and then repeated for several times a day. The intermission generally at every fifth beat was sometimes absent, and was *abolished at any time* by walking a few times rapidly round the room. He was ordered Hoffman's anodyne, or, in extremity, brandy and water for his fainting turns; and in the intervals, in varied succession, preparations of iron with hyoscyamus or conium, the tris nitrate of bismuth, with the tr. of columbo, &c.; tincture of nux vomica and hop; cold sponging; abstinence from his favorite cigars, late suppers, and exciting company. After various vicissitudes he is now better than for years previous, but his heart still occasionally "fails him."

Uterine and Spermatorrhœal Cardiac Debility.—Among the most common of all causes of an excessively weak heart are doubtless exhausting discharges from the generative organs.

Exhausted Heart—Menorrhagia—Improvement.—A lady, aged 36, slender, very pale, with blanched lips, having previously miscarried, consulted me in 1849 for faintness on slight exertion, palpitation, feeble tapping impulse, of an otherwise natural heart, connected with excessive and protracted menstrual discharges. These were checked by pills of acetate of lead, with powdered ergot and extract of hyoscyamus; after which, under tonic treatment, she left the city materially improved.

Weak Heart—Spermatorrhœa—Bellows Murmur—Recovery.—A clerk, aged 22, slight, pale, with dark areola, having learned the practice of masturbation four years previous, was admitted under my care in the N. Y. Dispensary in April last, with faintness on exertion, *soft, aortic bellows murmur*, palpitation, faint tapping impulse of the heart, hurried by exercise, with feeble appetite, trembling of the limbs, and nocturnal emissions from every night to once a-week. He was ordered to sleep on a hard bed, rise early, use cold sponging, and walk regularly some distance, avoid mixed company and lascivious books; to give up all solitary practices; to irritate the loins with croton oil, and take a mixture of two drachms each of the muriated tincture of iron and the tincture of hyoscyamus, with an ounce and a half of the tincture of columbo—a teaspoonful in a wineglassful of sweetened water three times a day; and in a few weeks he left quite improved. In the heat of summer an attack of severe diarrhœa brought on temporary relapse, with the bellows murmur, from which, by the use of powders of five grains each of tris-nitrate of bismuth and gum acacia, with a grain of opium every four hours it was checked. With subsequent tonics, he soon quite recovered.

Treatment.—We have given this so fully in the cases related, that within our present narrow limits, we venture only a few brief comments. In an organ so susceptible as the heart to mental impressions, we have always, so far as a delicate regard to truth and candor would allow, avoided admitting to the patient in functional disturbance, for his own good, that the heart was at fault, mentioning the organ as little as possible, using cheerfully the phrases "nervousness," "sensitiveness," "palpitation,"—and of inquiring constantly about the stomach, or some other offending organ. Indeed many of the patients mentioned very soon forgot their weakest point.

Partly for this reason, it will be seen, with sedentary and nervous citizens we have very constantly prescribed that powerful, *cheap tonic* for the million—*walking*. To insure faithful obedience, and give an idea of its importance, we have usually ordered it in *measured doses* of a certain number of miles daily. After the first fortnight, nothing cheers a desponding, nervous or dyspeptic patient so much. He soon feels, by the increased ease and comfort with which he executes his allotted task that he is really stronger. And then it relieves congestion by gradually distributing the blood to the chilly feet and hands; it gives tone to the stomach, and sometimes a voracious appetite; it is nature's laxative; it restores, by its grateful glow, the functions of the skin; it increases muscular energy; and it calms the irritable nervous system by its agreeable invigoration and the quiet sleep it begets at night; and lastly, by its gentle stimulus, it actually strengthens a weak heart. Providence has mercifully made our most necessary blessings easily accessible. Man was originally a *field animal.* Walking was the primitive exercise of our first parents in the bowers of Eden, and it is still healthier, in the main, than any other. We had occasion recently to make it a condition of attendance on a rich, fine lady, that she should, for a time, abandon her carriage for nature's locomotion, and in a few weeks we were *gratefully* obeyed.

Of great importance to the functions of the stomach, liver, nervous system, and, through them, to the disordered heart, is attention to that extensive surface, the skin. By telling delicate patients, if necessary, to retain the garments on the upper limbs, while the lower extremites are cleansed and vice versa; or, in cold damp weather, by adding a little alcohol or cheap spirit; and especially by free frictions, with a coarse towel or flannels, the most sensitive may sponge the body, on rising in the morning, with cold water at the coldest season of the year.

Of the medicinal means employed, we have only space to notice a class whose direct tonic influence upon the heart, and nervous system, we believe to be greater than any other. We refer to preparations of nux vomica, and its alkaloid, strychnia. Especially in dyspeptic complications and in excessive "debility of the heart," they are invaluable. For safety and convenience, we prefer either the strong tincture of the vomica nut or an equal quantity of the more uniform solution of the ordinary strychnia of the shops, the strength of a grain to the ounce, rendered soluble by the addition of one part of acetic acid to three of water—either preparation to be given in doses of five drops three times a day, in water, increasing cautiously, if necessary, to fifteen drops,—resting, if the tingling and twitching of "strychnism" occur, and commencing in smaller doses when they subside.

In explanation of their therapeutic effects, we may mention the beautiful recent experiment of Dr. Marshall Hall, in rousing the nervous system of the frog, stunned by division of the spinal marrow, by means of a solution of the acetate of strichnia, and the still more conclusive test of Prof. E. Weber, mentioned by Romberg, of producing by the application of strichnia to the severed palpitating heart of the frog, *tonic contraction.*

In conclusion, we tender our grateful acknowledgments to the members of the Society of Statistical Medicine, for their kind encouragement, in completing this sketch, necessarily brief and imperfect,[*] but conceived, it is hoped, in their spirit, based only upon *facts*—open to candid correction, and penned in the sincere desire to regard only the teachings of nature in the interpretation of medical truth.

Art. X.—*On the Effects of Poisons and Medicines upon the nursing Child when taken by the Nurse.* (Translated from the Journal für Kinderkrankheiten.)

At the session of the *Society of Practical Medicine*, Paris, in Feb., M. Courserant related a case in which he had prescribed an infusion of belladonna leaves as a local application in the purulent ophthalmia of an infant. The mother, thinking that it was intended for internal use, chose to take it herself, that her child might obtain the effects through the milk. Mr. C. found her prostrated and delirious, pulse thready, tongue dry, and skin cold; coffee, spirits, and ammonia were given with good effects. Instead of the child, a small dog was applied to the breast, and in two minutes it was attacked with cramps. On the fourth day the child began to nurse again with no bad effects. P. Dubois thought it doubtful if poisons taken by the nurse could impregnate her milk. He had often gived opium in large doses to nurses, but their infants were not affected. In the case of a woman attacked by cholera and nursing an infant six months old, he gave opiate injections to slight narcotism, but without harm to the nursing child. He had also applied extract of belladonna to the os uteri of a female in labor, and produced delirium, during which the delivery took place, but the child was not affected. Still, he should delay putting the child to the breast under such circumstances as long as possible. M. Guersant stated that he had treated a child suffering from a persistent diarrhœa, and consequent loss of flesh; it was finally given to a wet nurse, and a young dog applied to the mother's breast, which was immediately seized with a diarrhœa and soon after died. This proves that the milk can assume a poisonous character, either by an internal alteration or by external influence.

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[*] We hope to supply these defects, and to add more illustrations, and a statistical analysis of cases, soon, in a small volume.

PART SECOND.

CRITICAL ANALYSIS.

ART. XI.—*Practical Observations on Aural Surgery, and the Nature and Treatment of Diseases of the Ear.* With Illustrations. By WILLIAM R. WILDE, Surgeon to St. Mark's Ophthalmic Hospital, Dublin, etc. 8vo, pp. 475. Philadelphia: Blanchard & Lea, 1853.

A Treatise on Operative Ophthalmic Surgery. By H. HAYNES WALTON, Surgeon to the Central London Ophthalmic Hospital, etc., etc. First American from the first London edition. Illustrated by one hundred and sixty-nine engravings on wood. Edited by S. LITTELL, M. D., Surgeon to Willis Hospital for the Eye and Limb, etc. 8vo, pp. 599. Philadelphia: Lindsay & Blakiston, 1853.

AURAL and ophthalmic surgery are, by common consent, associated in the same department of practice. The analogy existing between the eye and ear, as organs of special sense, both in their anatomical arrangement and physiological action, is preserved also in their pathological state. This resemblance is however too slight to be of much practical advantage, and we group under the same head these two works upon special surgery, for convenience of notice, and not for the purpose of comparison of opinion. The announcement of a new work on the diseases of the ear will arrest the attention of every practitioner. No class of diseases has puzzled him more, for of none has he had so little accurate knowledge, and such meagre and unsatisfactory sources of information. The work best suited to the wants of the laborious physician, and the safest guide, as a manual of practice, has been the treatise of Kramer, published in 1838. But, since that date, such have been the advances made in the study of aural pathology —not less through the labors of this enlightened author than the observations and investigations of Lincke, Frank and Schmalz in Germany; Deleau and Itard, in France; and a large number of English writers, of whom Mr. Toynbee deserves especial mention, for his careful dissections—that Dr. Kramer has in a more recent work discarded his earlier opinions as no longer tenable.

Evidently, therefore, a new work on aural surgery, based upon more recent and reliable pathological views, and consequently more correct in its therapeutical details, was in demand. The treatise of Mr. Wilde supplies this deficiency. Taking advantage of the investigations of preceding authors, and adding his own careful observations, and laborious analysis of a large number of clinical cases, he has given to this department its legitimate rank in surgical science and art.

The treatise before us contains the result of ten years' experience in the treatment of the diseases of the ear, in an extensive practice, and the management of a large public institution in Dublin. The number of cases which came under observation at this hospital, during the last eight years and a half, was 2385, and of these 200 are very carefully tabulated. During this period the author has published several articles on the diseases of the ear, in the *Dublin Quarterly Journal*, and the *Medical Times*, which attracted considerable attention, and one of which was translated into the German language. The present work was issued simultaneously in this country, Great Britain and Germany. The edition in this country was issued under the editorial supervision of Dr. Addinell Hewson, a former pupil of the author. With these explanatory remarks, we shall proceed to the analysis of the more interesting and practical portions of the work in hand.

The first chapter of fifty pages contains the history and bibliography of Aural Surgery, and the subject is treated with an evident fondness for criticism. The student would do well to read also in this connection Dr. Kramer's *Critical Literary Review*, introductory to his work on the diseases of the ear, which contains an excellent analysis of the early writers.

Preliminary to the study of the special forms of disease, Mr. Wilde devotes two chapters to the *Means of Diagnosis*, *Statistics and Nosology of Ear Diseases.* The directions given under the former head are of such practical consequence that we shall detail them at length, but as briefly as possible.

The first and grand point in the treatment of diseases of the ear, is accuracy of diagnosis; and in order to this it is indispensably necessary to understand the best method of conducting an examination. The following is, in substance, the author's directions:

We are first to observe carefully the condition of the concha, external meatus, mastoid process, infrazygomatic region, and the space immediately below the lobe of the ear; then the auricle, in its various folds, its color, its temperature particularly, its thickness, as learned by feeling its hem or helix between the fingers, and the angle which it forms posteriorly with the cranium; also the position, size, shape, and color of the external meatus, as seen without altering the relaxation of the parts. To examine the outer third of the auditory canal, the upper rim of the helix should be grasped between the finger and thumb of one hand, and drawn upwards, backwards, and outwards, while the thumb of the other hand, placed in front of the tragus, draws it and the integuments forward upon the zygoma. The finger should then be pressed deeply and firmly upon the movable root of the tragus, and backwards between it and the articulation of the jaw; and upon the patient's opening and shutting the mouth, we are to notice the amount of pain which it produces. The middle and fore-finger should also be inserted deeply behind the ramus of the jaw towards the styloid process, and notice taken of the sensations experienced.

The mastoid process claims especial attention when inflammatory action is suspected. Firm pressure is to be made upon it with two fingers; and the same careful examination should extend to the posterior and lateral portion of the head, to the insertion of the sterno-mastoid muscle, as well as its upper third. A small gland, situated over the middle of the mastoid process, frequently becomes enlarged, and is the seat of severe neuralgic pain in aural inflammations. Percussion of the mastoid process occasionally affords some information.

We are next to examine the auditory canal, and external surface of the membrana tympani; and to effect this the patient should be placed opposite strong and direct sunlight, so as to allow the sun's rays to fall directly into a tubular speculum. Any wax, or other mechanical impediment which may be present, should be removed; if they are the chief cause of the deafness by completely obstructing the passage, they should be removed with a syringe and plain water; but if there is also present other, and especially inflammatory affections of the meatus or tympanal membrane, a pair of fine forceps should be used, as the injection will, by increasing the vascularity, mislead as to the actual amount of disease. For this purpose a pair of forceps having an angle in the shaft are to be preferred.

For the examination of the external auditory passages and membrana tympani, Mr. Wilde prefers the tubular speculum to all other instruments hitherto invented. These instruments consist of conical silver tubes of different calibres, each tube being an inch and a half long, five-eighths of an inch wide at the greater aperture, and varying from two to four lines in the clear at the smaller extremity. They should be made as light as possible, highly polished, both inside and out, with a stout rim or burr round the larger margin, and the smaller aperture well rounded off, so as not to irritate the ear in entering. He has tried them of various shapes and sizes, their sides running at different angles, and also with the interior blackened, so as to prevent reflection of the incident luminous rays, but found none which were equal to those just described. As different sizes are occasionally required, he has a set of three, formed so as to fit into one another for convenience of carrying. In using the speculum, sunlight is to be preferred to any artificial contrivance for the use of lamplight. While the auricle is drawn upwards and backwards with one hand, the proper-sized tube is inserted with the other, and pushed in as far as possible without giving pain; the head of the patient and the tube are then moved slightly, so as to permit a full stream of light to fall upon the tympanal membrane. By moving from side to side the larger aperture held between the fingers, the parts about the membrana tympani may be examined; and, by withdrawing it slightly, the whole canal may be carefully and accurately examined.

We should note in this examination the form, curvature, color, polish, vascularity of the entire auditory canal. If wax, muco-purulent discharge, or cerumen obstruct the view, it must be removed by a small spatula or a probe wrapped around with cotton. The points to be noticed in regard to the membrana tympani, are its color, transparency, tenuity, vascularity, arrangement of its vessels in every part,—its tension, flexibility, polish, curvature, and its position as regards the interior of the cavity, of which it forms the outward boundary,—the direction and projection of the handle of the malleus, and the character of the membrane, both above and below the attachment of this bone. The patient should also be directed to inflate the Eustachian tube, by expiring strongly while the mouth and nose are closed. While the air is forced into the drum we should note whether the membrane vibrates, or its tensity is altered, the degree of vascularity produced, as well as the position and course of the vessels, and finally the existence of a perforation of the membane which may now become apparent. The tube should now be removed, and the ear applied to the external auditory passage, to estimate the character of the sound produced in the middle ear by this inflation, whether it be the normal rush of air, or a prolonged squealing or gurgling sound, made by contraction of the

Eustachian tube from dryness, or an accumulation of mucus in it or the cavity of the tympanum. If the patient is unable to inflate the tympanum, and there is reason to suspect that the Eustachian tube is obstructed, or that there is an accumulation of mucus, blood, pus or other matter in the middle ear, and there is no inflammation present, air may be ejected by mechanical means, if the case require it.

Mr. Wilde enters into a minute description of the instruments which he employs in catheterizing the Eustachian tube, and the best method of operation. As this operation, however, is far less often required than has been supposed, we shall not stop to describe the different methods proposed.

Mr. Wilde strongly condemns the practice of indiscriminately probing and syringing the ears, without a proper inspection of the parts. If there exists an inflammatory condition of the auditory canal, or membrana tympani, the symptoms will be decidedly increased by such a proceeding. The degree of deafness is best learned by measuring the hearing distance with an ordinary watch held near the external meatus. It should also be held behind and in front of the auricle, and between the teeth, and in each instance the degree of hearing carefully noted. The throat should be carefully examined, the uvula, tonsils, and the orifice of the Eustachian tube, by the pressure of the finger. The voice also manifests a change in cases of long-continued deafness; the patient expresses himself in a loud tone, speaking as if out of breath, with a whistling sound, and at length the utterance becomes indistinct. Such cases the author considers unfavorable. The last prominent symptom to be interrogated is *tinnitus aurium*, of which the author remarks:

> The value of tinnitus as a diagnostic has been greatly overrated. It is certainly one of the most distressing as well as the most frequent symptoms attendant upon affections of the organs of hearing, but its cause is very obscure and difficult to comprehend, and its removal still more difficult to achieve. I know no symptom concerning which a more cautious prognosis should be given, as it is one common to almost all, and peculiar to none, of the diseases of the ear. Like muscæ volitantes in the eye, it may exist as an isolated symptom, or it may be an attendant upon several aural diseases. It is often caused by cerebral disease; therefore, we should carefully inquire whether it is felt in the head or in one or both ears; it is sometimes an accompaniment of derangement of the circulating, digestive, or uterine organs; of congestion of the brain, hemorrhage, hypochondria, hysteria, chlorosis, anæmia, typhus, influenza, or simple catarrh; of closure of the external meatus, obstruction of the Eustachian tube, and impaction of the auditory passage with wax; a foreign body, or even a hair resting on the tympanal membrane, as well as engorgement of the lining mem-

brane, or mucous collections in the tympanal cavity, and also nervous deafness, will all produce it. Furthermore, we may remove the original disease, give a healthy action to the affected organ, and restore its function,—yet will the noise remain. It is always most felt at night when the patient lies down to rest; it is least experienced in the open air, in a crowd, or when travelling in a carriage. It seldom or never coëxists with an open tympanal membrane, and, therefore, perforation of the drum has been resorted to, and occasionally with effect, to relieve patients of this distressing malady. In cases of complete acquired deafmuteism it is not present. So great is the discomfort which it gives, that persons incurably deaf, and who are quite conscious of the impossibility of restoring their hearing, will still apply to be relieved from this haunting and most annoying symptom; and therefore it is, that, in the quack advertisements, we always read of the "promise to cure ringings and noises in the ears." The peculiar characters of the tinnitus, and the noises to which it is likened, are as variable as sound itself. Do these characters depend upon the cause of deafness, or the portions of the organs affected? I have taken some pains to investigate the subject, and I believe not. They are no more dependent upon the causes of the disease, nor the structures engaged, than the peculiar form which ocular spectra and motes floating before the eyes are contingent upon the parts concerned in ophthalmic or cerebral diseases. No one has yet been able to arrange or classify the peculiar description of muscæ contingent upon congestion, amaurosis, choroid disease, cataract, or disease of the brain or its membranes, no more than they can satisfactorily account for both muscæ and "noises in the ears" in cases of hemorrhage.

The correctness of the estimate, which the author puts upon tinnitus as a symptom, is seen from the investigations of Kramer. (*Brit. and For. Med. Rev.*, vol. 24.) In 2000 cases of aural disease, tinnitus was present in 1267; in accumulations of wax, acute inflammation of the membrana tympani, and nervous deafness, it was present in 3 cases out of 4; it was as often absent as present in catarrhal and phlegmonous inflammation of the auditory passage, otitis interna, and in muculant obstruction of the middle ear; and, finally, in chronic inflammation of the membrana tympani, it was twice as often absent as present. The writer of this Review very justly concludes that tinnitus has not the slightest value pathognomonically, prognostically, or therapeutically.

Mr. Wilde closes this chapter with some remarks upon the proper mode of applying the remedies employed in aural affections. As most of these diseases are inflammatory, depletion, local rather than general, is usually necessary. The best method of abstracting blood is by leeches, and to be most effectual they should be applied immediately around and within the edge of the external meatus. "From four to six leeches may be readily attached round the meatus, and in this situation they will produce more immediate and permanent relief than three times the number affixed behind the auricle. The application in front of the tragus is also very much more effectual than upon the mastoid region. When, however, the latter locality becomes itself the seat of inflammatory action, they should also be applied freely all over it. Where we have already recently applied leeches in the two first-mentioned places, and the parts have thereby become swollen and irritated, the next most advantageous position is beneath the lobe of the auricle, behind the ramus of the jaw. I do not know any painful affection in which leeches, applied in the manner directed, produce the same amount of immediate relief as in disease of the ear. They should be had recourse to again and again, even upon the same day, and applied in numbers, to relieve paroxysms of pain, as well as to lessen the degree of redness and vascularity observable in the inflamed parts."

Of counter-irritants the common fly-blister is the most useful in acute cases, and pustulation by tartar emetic ointment in chronic cases. They should be applied to the mastoid region, care being taken to protect the auricle. "When there is much neuralgic pain complained of, extending from the ear over the side and back of the head, I have found the compound camphor liniment, with extract of belladonna, one of the most useful applications; but, in this preparation, care should be taken to rub the belladonna first with a little water in a mortar, otherwise it will not mix with the liniment. In children and young persons the strong tincture of iodine, containing some iodide of potassium, is a very useful remedy, and probably acts specifically as well as a stimulant; it should be applied with a camel-hair pencil daily, or every second day, unless the part begin to vesicate or the cuticle to peel off, when the application should be discontinued for a few days. The use of iodine, however, by the endermic method, is only of value by being long persisted in."

The application of heat and moisture are very grateful, and may be employed by holding the ear over the vapor of very hot water in the bottom of a long, narrow vessel, medicated with hyosciamus, opium, belladonna, marsh-mallows, camomile, or poppy-heads; or by a warm linseed-meal poultice, frequently renewed.

The author deprecates the practice of pouring stimulating or sedative liquors into the ear; nor has he any faith in electro-magnetism, galvanism, or electricity, in relieving deafness.

Mercury is the medicine upon which he places the most reliance, from its efficacy in controlling inflammation and removing its products. The same rules which guide in the administration of this remedy in ocular affections, may safely be adopted in diseases of the ear. The following remarks upon the virtues of the bichloride must accord with the experience of every practising physician:

> The third, and perhaps the most efficacious form, in which mercury may be used, is that of the bichloride, still commonly known in this country as the oxymuriate, one of the most valuable medicines of the entire Pharmacopœia. A treatise might be written on the virtues of this remedy, and the vast field of disease over which it exercises a sanative influence. Combined with Peruvian bark—which the chemists say is incompatible, but the product of the decomposition said to be produced by which, may be the very substance which acts most beneficially—it is almost a panacea for most of the strumous inflammations in children and young people; and its power in controlling scrofulous ophthalmia, corneitis, iritis, &c., extends equally to the cure of kindred affections in the ear. It is the best remedy I know of for inducing absorption of lymphy deposits in the membrana tympani, and general thickening and opacity of that structure, as well as very old cases of chronic inflammation of the membrane of the cavitas tympani. It is, moreover, when properly administered, one of the safest as well as the surest preparations of mercury: it may be taken for a great length of time; it seldom interferes with the ordinary occupations or amusements of the individual; it leaves no ill effects; it rarely induces ptyalism; and patients improve in health, and absolutely grow fat while using it.* It may be given alone, either in pills or dissolved in nitrous ether, proof spirits, or some of the tinctures, such as cascarilla, but it is much more soluble in distilled water than is generally known; it may be combined with the muriated tincture of iron with good effect, or with some of the preparations of sarsaparilla; but bark—either the tincture, syrup, or decoction—is of all others the medicine best suited for its administration. Our Dublin preparation of the syrup is, particularly for children, a good vehicle for it, provided the mineral is first dissolved in a little distilled water. Oxymuriate of mercury and bark sometimes disagree, producing, shortly after being taken, pain in the stomach, tenesmus, griping, and even diarrhœa; in such cases it will generally be found that it was taken before breakfast or on an empty stomach; it should therefore be administered an hour or two after meals. But when it disagrees, even with such precautions, a separation of the constituents will obviate the unpleasant effects: thus the mercury may be taken an hour or two before or after the bark. From the sixteenth to the eighteenth, or even the quarter of a grain, may be taken three times a day, according to the circumstances of the case, for weeks and even months together, with, however, short intervals occasionally.

Mr. Wilde devotes the succeeding fifty pages to the *Statistics and Nosology of Ear Diseases.* We need not dwell upon the matter of this chapter farther than to state that the nosological arrangement which he adopts is according to the anatomical divisions of the organ of hearing, the anatomy of each being given preliminary to the consideration of the several diseases to which it is subject.

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* I understand that the bichloride of mercury, in large doses, is used to fatten and improve the condition of horses in the West Indies.

Chapter IV. is devoted to the *Diseases of the Auricle, Mastoid Region, and External Meatus.*

Wounds and Injuries of the Auricle.—These accidents are of infrequent occurrence, except in countries where mutilation of the external ear is a capital punishment, or fighting with small swords is much practiced. Piercing the lobe is sometimes attended with erysipelatous inflammation, eruptions, and abnormal growths. The treatment of these accidents is simple, and need not be dwelt upon.

Tumors of the Auricle.—Morbid growths occurring upon the external ear are not uncommon. They may be situated upon the lobe, or upon the inner or outer aspect of the helix. Fibrous tumors not unfrequently form in the lobe, the result of piercing it, an example of which Mr. Wilde gives, with the operation for its removal. These tumors are liable to return after excision. Mr. Paget (*Surgical Pathology*) mentions a case in which both lobules were excised for the removal of such tumors, but on one side the disease returned in the cicatrix; this was again removed, and it did not return. Hypertrophy of this lobe occasionally requires an operation for its removal.

Inflammation of the Auricle.—Simple phlegmon is generally the result of stings of wasps or bees; boils frequently form upon it, and are more often seated around or within the meatus. Dr. Bird, a German physician, has described a form of inflammation peculiar to insane persons, in which the auricle swells, and in some cases the skin breaks. The treatment consists in hastening suppuration, and the free evacuation of matter when it forms. Erysipelas often attacks the auricle, arising from mechanical injury, general otitis, or, which is generally the case, from an extension of the disease from the head or face. Kramer describes a scirrhous degeneration of the auricle, which Mr. Wilde very properly considers chronic erysipelas, arising from an acute attack or a cutaneous eruption. Dr. Graves recognized a form of gouty inflammation of the auricle, which subsides on the occurrence of the disease in the extremities.

Cutaneous Affections of the Auricle and Meatus.—The most frequent of these are eczema and herpes. These affections may occur in the young or old; in the former they pursue a more active course, coexisting with scald-head, while in the old they are generally more chronic. In either case they are liable to extend into the meatus, and over the membrana tymphani. In old persons branny scales collect in the tube, but in the young the lining of the canal and tympanal membrane becomes coated over with a creamy discharge. The treatment of these diseases is thus given by our author:

Cleanliness and attention are indispensable to the eradication of these affections. In the first instance, continual poulticing with any emollient substance which keeps up heat and moisture is necessary. Linseed meal, boiled bread and milk, or well-mashed turnips, will be found useful applications. Afterwards, when the extreme heat, swelling, vesication, and redness, have subsided, a solution of the liquor plumbi, in the proportion of a drachm to the ounce, applied with several bits of fine lint, so as to completely envelop the auricle, and the evaporation prevented by covering over the whole with a piece of oiled silk, rarely fails to lessen the irritation, and reduce the parts to a healthy condition. The solution of gutta percha in chloroform, lately introduced by Dr. Graves in the treatment of other skin diseases, I have found a very admirable remedy in the chronic form of eczema aurium. The part should be painted over several times, until a complete varnish has been laid on, when the greatest relief from the heat and itching is experienced. The application should be repeated from day to day, as the material soon begins to peel off, but should never be applied until the acute attack has subsided. When the auricle is shining, of a bright red, and swollen, punctures made with the point of a lancet, particularly in the helix, will give great relief. In the chronic stage good may be effected by painting the part with a strong solution of nitrate of silver.

But while we employ these local measures, we must not neglect constitutional means. Strict attention to diet should be enforced; salt meats, savory dishes and pastry, ought to be avoided, and a sufficient quantity of fresh vegetables should be consumed at dinner. After the patient has been well purged, a course of Plummer's pills may be prescribed with advantage—at least, five grains daily for an adult; and, in a little time, some of the preparations of sarsaparilla administered in lime-water, will hasten the cure, and assist to eradicate the disease from the system. This affection is very apt to relapse, and we should, therefore, continue both our local and constitutional remedies long after the inflammatory symptoms have subsided. Old ladies think that they can never have a sufficient amount of warmth about the head, and it is very difficult to induce them to leave off even one flannel nightcap; but we should at least make the attempt, as the head and ear ought to be kept as cool as possible. As the swelling and inflammatory symptoms subside, we should again turn our attention to the state of the auditory tube. If any discharge exists, the meatus should be syringed gently with tepid water daily; and both it, the concha, and the tympanal membrane, washed over every second or third day with a solution of nitrate of silver of the strength of at least twelve grains to the ounce. Still more advanced in the progress of the treatment, when the exudation has completely ceased, and the thickened cuticle has been quite removed, much benefit will be derived from smearing over the tube and membrana tympani with brown citrine ointment (*Ungt. Citrinum Fuscum*) every third or fourth day. It should be applied in a melted state with a camel's-hair pencil, and diluted by about one-third of almond oil. This ointment, in which I have great faith in all diseases similar to that now under consideration, should be made with either rape-oil or cod-liver oil, instead of the olive-oil with the lard or butter usually directed in the Pharmacopœias; it is then of a much darker color, and never becomes hard or crumbly.

Diseases of the Mastoid and Pre-auricular Region.—Our author specifies six kinds of post-aural tumors, with which the surgeon should be familiar. The first is a small gland lying upon the mastoid process, on a level with the tube of the ear; it may enlarge to the size of an almond, and become so painful as to resemble a neuroma. It generally occurs in young females. The application of iodine and administration of tonics, especially iron, will effect a gradual cure. The second form is a suppurating gland, occurring in scrofulous constitutions, or persons who have suffered from an inflammatory action of the middle ear or external meatus. It is often seen in children during dentition. A point of diagnostic importance is the situation of this gland, which has its principal bulk below the level of the meatus. The treatment is the same as in the former case. The third form resembles a lumbar abscess, and, like it, is generally connected with diseased bone. The author gives the case of a boy laboring under this disease upon both sides; each tumor was of the size of half a hen's egg, fluctuating, painless, and occupying all the bare space behind the auricle. The skin was nearly of its natural color, but traversed by blue veins. The tumors were opened, and discharged a curdy, scrofulous matter; the child's health gave way, and death ensued from "water on the brain." The fourth form is the result of acute inflammation, either from acute periostitis of the mastoid process, or accumulations of matter in connection with the mastoid cells, the result of disease spreading from the middle ear; or, finally, caries from otorrhœa. This form of tumor requires prompt attention, as the diseased action is liable to extend to the inner table of the cranium, to the meninges of the brain, and even the brain itself. The proper treatment consists in laying the tumor freely open down to the bone. The fifth form of tumor is aneurism of the posterior aural artery; and the sixth, malignant fungus.

Foreign Bodies in the Auditory Canal.—Mr. Wilde condemns rude efforts to extract foreign bodies from the ear as more likely to do harm than these bodies themselves. He mentions instances coming under his own observation, where the patient has suffered no inconvenience whatever, until attempts were made to remove the offending substance, when the ear became excessively tender, and the seat of most excruciating pain. Not unfrequently, in such cases, as Mr. Wilde's examples prove, and as we have ourselves known, the bony canal of the tube has been denuded of its lining membrane, and even mistaken for the foreign body. The following case is in point:

A practitioner brought a child to my house, who, while playing with some pebbles, allowed a small white stone to slip into the external meatus six hours before. She had not complained of pain; but the friends became alarmed, and were most anxious to have the pebble removed, "lest it might get into her brain." He had, he said, used various instruments, but without success, to extract or dislodge the pebble. The child appeared then in great agony, and the countenance was highly characteristic of the distress experienced. There was considerable hemorrhage from the ear, and the external aperture had already begun to swell. Upon examination, I found the meatus extensively lacerated, and could perceive and touch a white, rough surface on its anterior wall; but as I felt sure that it was not the offending body, but the denuded bone, I recommended, strongly against the wish of my friend, a cessation of hostilities, at least until the hemorrhage had ceased. A leech was applied to the margin of the meatus, and afterwards a poultice placed over the ear. Upon visiting the patient next morning I found that suppuration had been established during the night, and on syringing the ear with a little tepid water, the white quartz pebble appeared at the external aperture, and was easily removed with a forceps. Upon further examination, I found that the membrana tympani had been ruptured anteriorly, and that the bone was denuded for a considerable extent by the efforts made to extract the foreign body. The parts, however, eventually resumed their natural appearance.

If syringing the meatus with simple warm water fails to dislodge the substance, resort must necessarily be had to instruments. Mr. Wilde uses a small silver spatula, slightly curved, at its extremity. The canal being brought fairly within the field of the speculum, the operator may, with the spatula, in nearly every instance, dislodge the body. If it has got in a situation where it can not be got at, syringing may so alter its position that it can be removed with the spatula, or seized with forceps.

Diseases of the Cerumenous Glands.—These glands may have an increased, diminished or changed secretion, the two former conditions depending upon the degree of inflammation existing around or within the meatus, and the latter upon a chronic inflammation existing in the glands themselves. The practioner is often required to treat affections of the ear depending upon collections of wax in the meatus. Mr.

Wilde found 579 cases in 2385 cases of disease of the ear. Kramer gives 213 cases in 2000 cases; and Clarke* 16 cases in a total of 140. In these cases deafness is often a marked symptom, the degree of which depends upon the size of the plug occupying the auditory passage, and its consistence. The patient sometimes hears a slight report in his ear, especially after eating, when the hearing becomes immediately improved. This is owing to the plug of wax becoming disadjusted so as to admit the passage of air to the drum. But the improvement is only temporary, for the wax comes again to fill more or less completely the passage. The treatment of these cases consists in removing the wax, and for this purpose a jet of fluid should be directed against the *edge* of the plug, with a small syringe. Sometimes it may be removed with fine long-bladed forceps. If we fail at the first sitting, a few drops of warm oil should be introduced, and a bit of cotton moistened with oil placed in the passage to soften the plug. The following case illustrates the author's method of procedure:

L. W., a male aged forty, applied on account of deafness in his left ear of some weeks' standing, but which had recently increased very much. Complains of noise like that of a boiling kettle. Hearing distance, two inches; says it varies from time to time, but that it was always better after eating until lately. Occasionally he experiences a loud noise, as if a report took place in his ear, after which the hearing is improved. His disease is of twelve months' standing. Upon examination, I found the external auditory passage filled to its aperture with hard, brownish, inspissated cerumen. It is so hard, that percussion with a probe conveys the sensation to the fingers as if struck against a body as firm and resisting as stone. Numerous short but firm hairs grew around the external aperture, and some of the more internal ones are probably mixed up with the hardened cerumen, and so assist to keep it immovably fixed in its place. The mere projection of a stream of warm water from a syringe will not easily remove such a thoroughly impacted mass as this. It must be assisted out with the spatula, slightly bent at the end, like the old lever used in midwifery: but the ear should be syringed from time to time as we proceed with our manipulations. When well loosened, I removed it *en masse* with a pair of fine forceps, and perceived that with it came out a large collection of hairs, which had become entangled within it; and that all its lower portion and its extremity was covered over with a layer of soft, white, thickened cuticle, the natural lining of the surface with which it has been so long in contact, thickened and separated by the pressure exercised upon it by this foreign body. Immediate relief to all the symptoms under which this person labored was experienced by the removal of the foreign substance. The hearing increased to twelve inches, and the noise lessened considerably. Upon inspection through the speculum, the membrana tympani was seen whitish and succulent, and having the parboiled appearance of the piece of cuticle which had been removed from it. Several large red vessels also ramified upon its surface, and coursed along the insertion of the malleus in particular. This condition was, no doubt, caused by the pressure of the accumulated and hardened cerumen; but in a few days the part recovered its natural character.

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* *Am. Jour. Med. Sci.*, July, 1852.

Inflammations of the External Auditory Canal.—One of the most frequent of these affections is abscess in the external meatus. It is the analogue of a stye upon the eyelid; but, being situated in a different structure, is far more painful. Its development is attended with tinnitus, and throbbing, and by evening exacerbations of pain, heat of skin and restlessness. There is not much redness of the part, and the abscess may not exceed the size of a pea; it approaches the surface slowly, pointing internally, and its contents consists of thick yellow pus, and a hard corn of dead cellular tissue. To prevent suppuration the solid nitrate of silver should be applied, but when matter has formed it should be set free with the knife. Warm fomentations, and the steam of hot water, may be employed to relieve pain. Mr. Wilde considers this disease constitutional, depending upon the same cause which produces boils in other parts of the system, and therefore recommends a careful treatment directed to the system, such as the regulation of the digestive organs, and the exhibition of bark with liquor potassæ.

Diffused inflammation of the external meatus generally involves the external layer of the membrana tympani, and ends in otorrhœa. It is a disease of infancy and youth, and appears more often in scrofulous constitutions. It may be idiopathic, traumatic, or specific, as when it occurs in the course of exanthematous fevers, or from the infection of gonorrhœal matter. The acute attack is characterized by dryness, itching, and heat of the part, a dull, aching pain, which gradually becomes acute, increasing towards night; fever, and even delirium. The lining of the meatus swells, is at first dry, then white and moist, and finally a purulent discharge takes place with relief to all the severe symptoms. The tube is sometimes coated with a layer of plastic lymph. The following case is given by the author as illustrative of the progress of this form of inflammation:

T. S., aged 46, a shopman, complains of deafness in his left ear, of a fortnight's duration, accompanied by a buzzing noise and throbbing. The disease commenced late in the evening, with severe pain, which continued all night, and which, although mitigated, has never entirely ceased since, but is always most distressing at night. Upon the fifth or sixth day he perceived a "slight moisture" in his ear, but was not conscious of any sudden burst, or a feeling as if something had given way within. The external meatus and auditory tube, as well as the surface of the membrana tympani, are coated over with a tenacious muco-cerumenous discharge, upon the removal of which the entire surface brought into view appears of a florid red, becoming pinkish and spotted with white on the face of the membrana tympani. Flakes of cuticle adhere to the walls of the canal. The spots on the membrana tympani appear to be patches of lymph effused on its surface; they are more of a yellow color than the specks of cuticle on the tube. The membrana tympani is still imperforate. We occasionally find the whole surface of the tympanal membrane covered over with a sheet of lymph like that which lines the trachea in cases of croup. He cannot hear the watch even on touching. On the right side the parts are healthy, and the hearing good. The treatment recommended to the patient has only aggravated his disease,—brandy and oil, laudanum, hot salt, and various stimulating applications, having been poured into the meatus.

This is a case too manifest to be mistaken; and, from the total loss of hearing upon the left side, it is probable that the inflammatory action has extended to all the layers of the membrana tympani, and has also passed into the cavity of the middle ear. Had it commenced in the latter, the pain and attendant fever would have been greater, and, on suppuration taking place, the membrana tympani would probably have been ruptured to allow the exit of the matter, and the case would now be one of internal otorrhœa, with perforation. Cases of this nature are very common during the winter months, or when cold east winds prevail in March and April; and are frequently induced by travelling upon the top of a coach, sitting opposite an open door or a broken window, or being exposed to a draft of cold air in any situation. I am frequently consulted by Roman Catholic clergymen during the season of Lent, for inflammation of the ear acquired while sitting in the confessional-box, often for hours together, in cold exposed places of worship, with the ear applied to a small aperture through which the wind is playing. In the foregoing case, local depletion, continued counter-irritation, and alterative doses of mercury, restored the parts to a healthy condition, and the hearing returned. In some cases of inflammation of the auditory canal the auricle is hot and swollen; but in no instance does it ever assume the œdematous character which the eyelids present in severe ophthalmia.

The treatment of acute inflammation of the external meatus should be strictly antiphlogistic, such as leeches about the meatus, purgatives, and the local application of heat and moisture. Counter-irritation may follow depletion; and astringent lotions are useful only when the disease becomes chronic; mercury is indicated when the tympanal membrane is involved.

Some authors mention gonorrhœa as a cause of inflammation of the meatus; but Mr. Wilde has never seen a case, nor does he believe that facts establish the occurrence of infantile otorrhœa from gonorrhœal infection, as asserted by Mr. Harvey of London.

Cutaneous Diseases of the Meatus.—These are generally the herpetic and eczematous eruptions which extend from the auricle to the meatus. In addition to the treatment referred to, the author recommends the application of a ten-grain solution of nitrate of silver; and when the lining becomes more healthy, the use of citrine ointment.

The remaining subjects treated of in this chapter are *Morbid Growths and Alterations in the External Auditory Canal, and Malignant Diseases of the Meatus.* These sections we shall be compelled to pass without farther remark.

In chapter V. our author enters upon the consideration of the most important, but least understood, class of diseases of the ear, viz.: *Diseases of the Membrana Tympani.* These affections have not been at all understood until recently. Lincke was the first to describe true myringitis, or inflammation of the drum of the ear. Mr. Wilde divides the different forms of inflammation of the membrana tympani into acute, subacute, syphilitic, strumous, chronic and febrile.

Acute Myringitis.—The diseases of the cornea and membrana tympani are remarkably analogous, especially in regard to the effect upon these structures. Inflammation of the tympanal membrane is generally caused by cold, and is seated primarily in the fibrous layer, but soon involves contiguous structures. Mr. Wilde's statistics give 113 cases of this disease in 2385; Kramer's, 45 in 2000; and Clarke's, 7 in 140.

The following are generally the order of symptoms. A seizure of sudden and intense pain in the ear itself, most generally first appearing at night, and attended with nocturnal exacerbations during the progress of the disease. This pain is of a most excruciating kind, producing at times delirium, and is likened to that of a sharp instrument penetrating through the ear to the brain: it is, especially when the cavity of the tympanum is engorged, increased by coughing, sneezing, blowing the nose, chewing, or swallowing, or by pressing upon the tragus, particularly when the jaw is open. The beating of the carotid is distinctly felt in the ear, and each throb of the artery, especially if the circulation be excited, increases the sufferings; and there is frequently a feeling of fulness and bursting within the organ. With this there is also pain and soreness over the side of the head, in the teeth, in the eye and temple, and in the superior lateral triangle of the neck, with occasionally stiffness and soreness of the upper portion of the mastoid muscle, and often flying rheumatic pains throughout the body, particularly in middle-aged persons, and those who have suffered previously from rheumatic attacks. If neglected, or unrelieved by treatment, the pain extends to the throat and mastoid region, and is increased on pressing the mouth of the Eustachian tube with the finger. The severity of the pain experienced, and the extent of soreness to the touch, is to a certain degree a test of the amount of the inflammation; and the peculiarity of the pain is also a means of judging of the seat of the inflammation; for if it is experienced in swallowing, mastication, or sneezing, &c., we may presume that the inflammation has extended over the middle ear.

Mr. Wilde continues with a very minute relation of the symptoms of inflammation of the membrana tympani, the morbid changes, &c., which will repay a careful study, but which we cannot pursue at any greater length.

The treatment consists in confinement to a warm room, local depletion, the employment of moist heat, aperient medicines, and counter-irritation. If the disease do not yield, recourse must be had at once to mercury; on this latter remedy our author places great reliance. If an ulcer appear on the membrane, it should be touched with nitrate of silver; if the mastoid process become engaged or the parts covering it, and no relief follow the use of these remedies, or fluctuation be felt, an incision should be freely made to the bone. The following case illustrates the points above alluded to:

C. L., a female, aged 21, applied at the hospital at ten o'clock on the morning of the 18th of April, 1846, for an attack of intense pain in her right ear. She states that she has not been "regular" for the last six weeks; that she was attacked four days ago with catarrh, attended with considerable stuffing in her nose, and the other usual symptoms of that affection; that she had walked along the sea-shore the day before, with a cold wind blowing upon her right side. She went to bed tolerably well last night, but awoke at three o'clock this morning with a violent beating pain in her ear, accompanied by a loud noise, which she likens to the "puffing of a steam-engine"; the pain resembles that of a sharp instrument penetrating through her ear into her head, which she describes as most excruciating. She had also some pain and soreness over that side of the head; she felt some difficulty of deglutition, owing to the pain it caused her. Coughing, sneezing, or any motion of the temporo-maxillary articulation, greatly aggravated her sufferings, and gave her a feeling of bursting in the middle ear.

She rose at seven o'clock, felt great sickness of stomach, and had a well-marked rigor whilst dressing. She immediately applied to a neighboring practitioner, who put some "drops" with a piece of cotton into her ear, which only aggravated her symptoms. Her pain still continues, and the noise has increased; there is slight redness and great heat of the auricle. The pain is increased on making pressure over the tragus in front of the meatus; on pressing or percussing the mastoid process, slight pain is also complained of. The pain in her ear, however, is not increased by these means, nor is it referred to the tympanum. She has no pain beneath the meatus, nor behind the angle of the jaw. The hearing distance, with an ordinary ticking watch, is scarcely three inches in the right ear. On closing the meatus of the left side, the noise is greatly increased. On examination with a speculum, the auditory canal is found highly vascular, dry, devoid of cerumen, and exceedingly tender to the touch. The membrana tympani has lost its polish, and is of a bright, florid, generally-diffused red color, spotted with small patches of a deeper hue, like minute ecchymoses. The projection of the malleus can be recognized, of a darker color than the surrounding parts, with a whitish line in the centre. Below the malleus, and towards the posterior part of the membrane, a well-defined vesicle, about the size of a grain of mustard-seed, and filled with a brownish fluid, can be seen. Upon holding the mouth and nose, and pressing the air into the Eustachian tube, she experiences considerable difficulty in making it pass up upon that side, while it passes with facility into the tympanum of the left. The ear, or a stethoscope, held to the right side during this operation, readily perceives, as soon as the air reaches the tympanum, a squealing and gurgling sound, as if the air passed not only through a narrow passage, but through a fluid-like mucus. This pressure of air into the tympanum greatly aggravates her symptoms.

Upon looking into her mouth, the fauces, uvula, and back of the pharynx are found nearly of their natural color. Upon inserting the forefinger of the right hand into the mouth, and pressing its point upwards, backwards, and outwards, towards the mouth of the Eustachian tube, considerable increase of pain is experienced in the middle ear. The tongue is coated; the pulse regular; but there is heat of skin and considerable anxiety of countenance. The left ear is natural in function and appearance. This patient suffered from rheumatism of the upper extremities some time ago.

Four leeches were applied around the meatus, as far in as possible, and four in the depression in front of the tragus. She was ordered to foment and steam the ear over hot water, placed in the bottom of a long narrow mug, frequently during the day; and a purge was administered.

19th. States that she received immediate relief from the leeching. The countenance is less anxious, and she slept well all night; the noise of a steam-engine is altered to a gurgling sound; the pain and all other symptoms are relieved; the membrana tympani, however, remains nearly the same in color, but the vesicle has become flaccid. She was put on the use of calomel and opium in small doses frequently repeated; a blister was applied over the mastoid process; the fomentation and warm vapor was ordered to be continued, and a linseed-meal poultice to be applied to the external ear at bedtime.

20th. Continues to improve. Noise changed to that of the ringing of bells; the pain, on pressing the mouth of the Eustachian tube, is much less; the membrana tympani is less vascular; the general symptoms have all improved; the mercury to be continued.

21st. All the symptoms relieved; the mouth is slightly sore; no pain on pressing anywhere around the ear or meatus; all heat and vascularity of auricle is removed; the membrana tympani has lost its vascularity, but is slightly more opaque, and whiter than natural; the vesicle has quite disappeared; three or four large vessels can still be seen coursing along the handle of the malleus. Upon forcing air through the Eustachian tube into the tympanum, a slight gurgling noise can be perceived in the middle ear, and of the peculiar sensation which it imparts the patient is quite conscious. During this operation, and while the membrana is within the field of the speculum, a slight blush of redness, of a pinkish hue, is observed to be produced in the membrane. The hearing distance has increased to four inches. A copious red deposit was observed in the urine. She has been slightly purged by the mercury; ordered to lessen its dose to one pill night and morning.

23d. Continues to improve in hearing; noise as before; she has had no return of pain in the ear: the pain and soreness in the head gone; no flying pains or other rheumatic affection; the mouth is very sore; ordered to omit the pills, and take the sixteenth of a grain of oxymuriate of mercury with decoction and tincture of bark three times a day; generous diet.

25th. Continues to improve rapidly; membrana tympani is more transparent than upon last examination. Hearing distance is increased to twelve inches; slight pain is still felt on pressure over the lower portion of the mastoid process, and opposite the point of the styloid process, in which latter place it is still increased on coughing. Ordered to continue the oxymuriate and bark, and to apply another blister.

All her symptoms have now disappeared, with the exception of a slight buzzing occasionally; the hearing is perfectly restored.

Four months later I had an opportunity of examining this young woman again; her hearing had been quite restored; but she said that she occasionally suffered from a slight "ticking noise." The membrane of the drum upon the affected side presented a slight mottled appearance, particularly towards its lower edge, but without an opacity of any account; her hearing distance is two feet less upon the right side than the left.

March, 1851. She had a slight attack of pain in the right ear, accompanied by some deafness and redness of the membrana tympani, all of which were at once removed by the application of leeches.

January, 1852. She has not had any return of pain or deafness; parts natural; hearing normal; no tinnitus.

Mr. Wilde relates an interesting case of inflammation of the membrana tympani and otitis, rheumatic in its character, from which we extract the following:

I first saw this gentleman upon the 13th February; he complained of acute pain in his right ear, which, as appears from the foregoing account, had continued off and on during the previous fortnight. The pain here described as "shooting from the ear to the temple and top of the head, accompanied with a boiling and pumping noise, like that of a steam-engine;" the pain also appeared, according to his own description, to reach to the throat, without making the throat sore; it was increased by sneezing, but relieved by pressing the hand upon the ear and side of the head. The auricle was hot and somewhat swollen; the lining of the meatus and auditory canal was red, tumid, and completely devoid of cerumen; the introduction of the speculum, and the examination, caused a good deal of pain from the tenderness of the parts; the membrana tympani was of a dark, brown-red color, had lost its polish, and appeared to be swollen and pressed outwards: the projection of the malleus could not be discerned; pressure in front of the ear gave a good deal of pain, but there was no tenderness over the mastoid process. Rest, abstinence, confinement to the house, constant fomentations, leeches round the meatus, with small doses of blue pill, James's powder, and hyoscyamus, at night: and an aperient in the morning, was the treatment resorted to during the next few days.

Upon the 19th, his symptoms, with the exception of the pain in the ear, continued much the same; he had also flying pains of a rheumatic character in the side of the head, the wrists, feet, and generally throughout the body. The pumping and boiling noise remained unabated: the deafness now became complete upon that side. The appearance of the ear continuing unchanged, except that the meatus was more swollen, it was deemed advisable to place him under the influence of mercury,—an opinion in which Dr. Stokes, who saw him with me, at that time concurred. He was accordingly, but with some difficulty, mercurialized by means of small and frequently repeated doses of blue pill, calomel, and opium. When his mouth became sore, the pain in the ear and the noise lessened somewhat, and the general rheumatic affection disappeared; but the meatus and auditory canal now became so much decreased in calibre, owing to the thickening of the lining of these parts, that it was not possible to gain more than a glimpse of the red and swollen membrana tympani. The leeching and blistering were continued, and the surface denuded by the latter were dressed with extract of belledonna and mercurial ointment.

March 10th. The cuticle became detached, and a slight muco-purulent discharge took place from the external meatus; the ear was then syringed with plain tepid water; he was allowed a more generous diet, and placed upon the use of the hydriodate of potash, with infusion of bark and tincture of orange peel. His general health now improved; he slept better, and was able to go abroad and take exercise; the discharge, however, continued to increase, and emitted a very offensive odor; and, at the same time, he began to complain of a deep-seated soreness all over the side of the head, behind the ear, but particularly over the mastoid process and immediately below it. Towards the end of March, upon examining the ear carefully under a good light, a small polypoid excrescence of a light red color, growing from the posterior wall of the canal, and completely filling up the cavity, was detected; this I removed with a wire snare and the discharge then lessened; the soreness of the side of the head, the pumping, and the deafness, however, remained the same. Pressure over the mastoid process and the post-aural region of the head, very much increased the soreness, and it was now evident that the periosteum covering these parts was inflamed.

During the latter part of the month of April, and all the month of May, the symptoms of periostitis remained much the same, and the scalp itself became inflamed, having a dusky, red hue, pitting on pressure, and feeling excessively soar to the touch. The treatment consisted in the frequent abstraction of blood from the affected part by means of a few leeches, and a small cupping-glass applied over the leech-bites; poulticing, inunction with different ointments, both of a sedative and absorbent nature, slight vesicants, &c., and change of air.. Bark, potash, and iodine were also taken with a view to improve the general state of the constitution. He had no headache, rigors, or perspirations, and his sleep and appetite were tolerably good; still, however, the pain continued, and the dusky redness and tumefaction of the scalp remained, although there was no evidence of suppuration. It was determined, in consultation with Mr. Cusack, to make an incision down to the bone, and thus free the periosteum, and give exit to any matter which might be contained beneath it. Accordingly upon the 29th of May, I made a perpendicular incision, about two inches long, nearly parallel with the posterior margin of the auricle, by inserting a sharp-pointed scalpel down to the bone at the point of insertion of the mastoid muscle, and carrying it upwards and a little backwards. The bone did not feel rough or gritty under the knife. A pledget of lint was inserted into it; and when the hemorrhage had ceased, a linseed-meal poultice was applied over it. The wound suppurated kindly, and all the surrounding soreness of the scalp and pain on pressure soon disappeared. As the discharge from the wound increased, that from the meatus lessened, and in about ten days the wound itself healed without any exfoliation of bone. The pumping noise now ceased altogether, the discharge from the ear also lessened very much, and all uneasiness in the parts ceased.

After the removal of polypus growths, Kramer recommends the acetate of lead, in solution, as far surpassing the lunar caustic in preventing their return. " I have even," he says, " observed that the polypus of the membrana tympani, under the influence of the solution of the acetate of lead, shrivels, and is eradicated even more certainly than can be expected from an operation."

Subacute Myringitis generally appears in persons between the ages of 15 and 30. It is unattended by pain, the first symptom being sudden deafness; tinnitus is not always present, but there is a feeling of stuffing in the nose. The nature of the difficulty is learned only by inspection of the membrane, which is of a pink color when seen early, but later it becomes opaque. Mercury is as necessary in this disease as in the preceding. After the constitution has been affected by the mineral, the bichloride should be given in minute doses in tincture of bark. To relieve the tinnitus aurium, which continues after the subsidence of the disease, Mr. Wilde recommends the arnica montana, as a medicine having specific power over this complaint. He gives fifteen drops of the tincture of the flowers or leaves in a tablespoonful of the infusion of arnica, and some cordial tincture, three times a day. After a few days the dose should be increased one or two drops daily, till it reaches thirty or more, the effects upon the head being carefully watched, and the bowels attended to. Where there is much relaxation of the mucous membrane of the throat and nose, Mr. Wilde considers tobacco smoke inhaled from a *good* cigar very beneficial, from its stimulant effects.

Syphilitic Myringitis is alluded to by but few authors. Lincke describes such a form of disease, but so loosely that it is doubtful whether he had any just conception of its true character. Kramer makes no mention of it, and the author gives but three cases. Without entering into a detailed description, the following case will give the reader in brief the characteristic symptoms and treatment of syphilitic myringitis:

Mr. A. B., aged 30, had a doubtful-looking sore upon the penis, twelve months previous to my seeing him. Considerable doubt was expressed as to the genuine syphilitic character of the sore; but it healed under local treatment. Some months subsequently he had a bubo in the right groin, and a small abscess also formed on the under side of the urethra; he then rubbed in mercury and was confined to the recumbent posture, until the swelling of the groin had completely subsided. After this he experienced great weakness and lassitude, and suffered for several weeks from sore throat. These symptoms were relieved by removal to the country; but on his return to town, an eruption appeared extensively on the genitals, thighs, and abdomen, and he had also some slight deafness. He was benefited by the use of hydriodate of potash; but the eruption came and went, both on its original seat and on the chest and extremities, during the next few weeks. I first saw him with Mr. John Evans, in the middle of October, 1847; he had then no sore throat, but a fresh crop of eruption, in the form of brownish spots interspersed with small pimples, had appeared generally over the back and the outer sides of the arms. He had also become exceedingly deaf, hearing the watch only when pressed against the auricle, and he complained of a sense of giddiness and fulness in the head, but had no pain whatever in the ears, nor any snuffing in the nose. He stated, that his deafness had occurred suddenly, a few hours after rising in the morning some days before; that he had tinnitus at the commencement, but that it had now nearly vanished. Upon inspection, the auditory canal was found dry, and the membrana tympani of an uniform dark brown-red color, so that the situation of the hammer-bone was not easily recognizable. There was no ulceration observable, nor any alteration in the plane of the membrane; but the light was not reflected from it in the ordinary manner, thus showing it had lost its polish. These appearances were nearly the same upon both sides. He was able to inflate the drums perfectly, and auscultation afforded no evidence either of contraction of the audito-faucial passages, or of any accumulation of fluid within the tympanum.

The treatment consisted in the application of leeches round the meatus every second day, and the use of calomel and opium in small and frequently repeated doses. This mode of administering the mineral disagreeing, we were obliged to discontinue it, and substitute inunction in its stead. The deafness and the appearance in the ear remained unaltered until the morning on which salivation was produced, and then hearing was restored almost miraculously, and the next day the redness and vascularity in the ears had almost disappeared. Gentle ptyalism was kept up for some days longer. He has not since had any return either of the deafness or other syphilitic symptoms.

Strumous Myringitis occurred in 24 of the 2385 cases given in the table. This is an affection of young persons of a scrofulous habit. The first symptom is slight deafness, which is generally attributed to inattention; the meatus is dry, and the tympanal membrane has a uniform pinkish hue, the fauces appear red, and this engorgement extends through the Eustachian tube. There is no pain, or tinnitus, but crackling sensations, gurglings, and loud reports, are felt in the ear; catarrh is often present, and strumous affections of the eye frequently complicate the disease, the system is usually depressed, the patient being languid, pale and inactive. The treatment best adapted to such cases is that employed in strumous diseases generally, as tincture of bark and iodide of potassium, or bichloride of mercury; cod-liver oil, when there is a strong constitutional taint; chalk and mercury to regulate the bowels; counter-irritation by vesicating liniments. These means are to be persevered in for a length of time, and combined with careful attention to diet, air and exercise. Relapses are very common, and of this the patient must be notified.

Mr. Wilde does not advise the removal of the tonsils in these cases, as he does not believe that they are the cause of the deafness which may exist. He prefers the application of nitrate of silver to the fauces and mouth of the Eustachian tube.

Otitis in connection with Ophthalmia.—Strumous affections of the eye and ear may coëxist or alternate in the same patient, both diseases depending upon the same constitutional diathesis. The treatment of these cases is the same as that last detailed.

Chronic Myringitis.—Wilde's statistics give 396 cases of this form of inflammation of the ear in 2385 cases of aural disease applying for treatment; Kramer found 397 in 2000 cases; and Clark gives 42 in 140 cases.

Of Kramer's 397 cases, both ears were affected in 279, and the number of males was more than twice that of females. It does not seem often to be a sequela of acute inflammation, for while the latter occurs only in the ratio of 1 to 22 of all the cases, the former bears the ratio of 2 to 1, showing that the chronic form has no acute stage. It is, however, very frequently the sequela of exanthematous fevers, especially scarlet fever. Kramer found this to be true in one-fourth of the cases of chronic inflammation of this membrane; and Clarke found it, in 22 of 42 cases, or more than one-half.

The earliest symptom of this disease is deafness, which may not be attended with pain; or this latter may come on in paroxysms. The membrana tympani appears of various shades of red, thickened and opaque, and having scattered over the inflamed surface granulations of a pearly lustre. When the inflammation is increased by cold, the membrane becomes of a dark red color, resembling its analogue, pannus of the cornea. In the majority of cases, according to Kramer, the membrana tympani is perforated, and in such instances the Eustachian tube is always free. A morbid secretion flows from the ear of a variable character, but the meatus is generally unaffected. When left to itself, this disease lasts through life. The prognosis is unfavorable, and much more so, according to Kramer, when the hearing distance is short, even though the inflammation be removed.

In the treatment of this disease, cleanliness is of great importance, and this is accomplished by syringing the ear with tepid water. Mr. Wilde uses the nitrate of silver as a local application, avoiding its use when the membrane is inflamed. Kramer recommends a solution of acetate of lead, varying in strength from gr. i. to grs. x. to the ounce of water, to be dropped into the ear two or three times a day; and prefers this remedy to nitrate of silver, or any of the astringent minerals.

The success which attends the treatment of this disease is not very flattering. Kramer effected a perfect cure in 1-14th of the whole number of cases, and improved 11-14ths. This result, he thinks, is not to be wondered at, when it is remembered that in one-half of all the cases of chronic inflammation of the membrana tympani there was perforation of the membrane, and in one-fourth of the whole number of cases there were polypus growths.

The remaining affections of the membrana tympani treated of in this chapter, are *Morbid Deposits*, *Collapse*, *Artificial and Accidental Perforation*, *and Artificial Membrana Tympani.* We shall pass these sections with but a remark or two. Mr. Wilde agrees with Kramer, that "the thickening of this membrane, unaccompanied by any other disease of the ear, invariably affords the only true indication for its perforation." Kramer's statistics present some curious facts on this subject, from which it appears, that "in chronic inflammation of the membrana tympani, the hearing is more frequently less deteriorated, when the membrane is still unperforated, than when it is perforated; and, therefore, that there is little prospect of advantage from the operation of perforating the membrana tympani. If, however, the operation should in any case be had recourse to, as large an opening as possible should be made, as it appears that the hearing was more frequently less deteriorated in cases in which the perforation was large than when it was small." (*Brit. and For. Med. Rev.*, July, 1847.) This operation is not very often practised in this country. Prof. Mutter,* has operated eight times in obstruction of the Eustachian tube, but without any benefit whatever to his patient. Dr. Mott,* whose surgical experience is entitled to the highest credibility, believes that, in simple closure of the Eustachian tube, without any other defect of the auditory apparatus, "philosophically and surgically, there is every justification for recommending and performing the operation."

The plan of restoring the hearing by plugging the aperture in the membrane tympani with cotton, first made known by Mr. Yearsley, is of such practical consequence that we shall copy Mr. Wilde's description of the method of applying it:

> The cases in which it is most effectual are those where there is a very large aperture in, but not a total destruction of, the membrana tympani. It requires some tact to hit off the exact position in which to place the bit of cotton; but the moment it is done, either by the practitioner or the patient, the hearing is restored. It should be made to fit on or into the aperture in the membrane, not completely to block up the meatus, nor to press against the inner wall of the tympanum. It ought to be passed down with a fine forceps or probe, and patients should be taught how to introduce it themselves; the lady by whom I first saw it employed always carried a bodkin, a little fine wool, and a bottle of oil, for the purpose. I do not think it matters much what the fluid is; I generally use fine oil, and after the bit of cotton is saturated with it, I press it gently between the fingers. As there is always some discharge from the exposed mucous membrane in these cases, a sufficient moisture is kept up for two or three days; but the wool or cotton should be removed from time to time, according to the patient's own sensations, and never allowed to remain in longer

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* A Treatise on the Anatomy, Physiology and Disease of the Human Ear. By James Bryan, M. D., Philadelphia, 1851.

than three or four days. If there be much discharge present, the wool or cotton may require removal daily. It is astonishing with what adroitness a patient will sometimes hit off the necessary position of the cotton, even after the practitioner has failed to adjust it. Notwithstanding some ingenious attempts at explanation, we still require a feasible solution as to how this remedy acts.

Mr. Toynbee has recently recommended a thin plate of vulcanized India rubber or gutta percha, attached to a wire stem, as an artificial tympanic membrane, in lieu of the wool or cotton remedy. I have no experience of it; but I doubt its general applicability.

Chapter VI. is devoted to the *Diseases of the Middle Ear and Eustachian Tube.* The first part is occupied with the anatomy of these portions of the auditory apparatus, and malformations and injuries of the tympanum. We shall have space to notice only the more important forms of disease in this division.

Acute otitis, or inflammation of the lining membrane of the cavitas tympani, occurred 69 times in 2385 cases, according to Mr. Wilde's tables; and 6 times in 140, according to Dr. Clarke's. This disease is one of the most painful affections of the ear. The pain comes on often at night, and is of the most excruciating character; in the intermission, there is a throbbing, dull aching in the ear; soreness of the side of the head, and down the neck. Acuteness of hearing at first is replaced by deafness from accumulation of mucus in the tympanum; the patient cannot inflate this cavity; the membrana tympani is of a brownish red color, but not as florid as in myringitis. The meatus, as also the Eustachian tube, becomes affected; the patient has the constitutional symptoms of acute inflammation, as fever, dry skin, furred tongue, costive bowels, restlessness, intolerance of light, and often delirium.

The disease may terminate by resolution, by rupture of the membrana tympani, and discharge of matter externally; or, lastly, and most seriously, by extension of the inflammatory process to the mastoid cells, or inwardly towards the brain.

This disease is to be diagnosticated from myringitis principally by the greater severity of all the symptoms. The treatment is the same as that of myringitis; mercury is more necessary, both to check the disease in the ear, and prevent its extension to the brain.

Subacute Otitis.—Mr. Wilde considers the otorrhœa, occurring during the progress of phthisis, as depending upon a subacute, ulcerative inflammation, which has extended to the tympanum through the Eustachian tube; the membrana tympani, having become thinned, is ruptured during a fit of coughing. Otitis occurring during an attack of exanthematous disease, is the result of an extension of the affection of the throat to the lining of the cavity of the tympanum. Mr. Wilde shows that many of the cases of acquired muteism are the result of this complication, and very properly urges greater attention to the ear in these diseases. Scarlatina seems to be especially the cause of this unfortunate condition. Thus, according to the report of the Belgian government in 1847, of 1892 cases of acquired muteism, 216 were from scarlatina, 80 from measles, and 28 from smallpox; in this country, of 86 cases, 41 were from scarlatina.

Otitis with Inflammation of the Facial Nerve.—Paralysis of the portio dura, as the effect of otitis, is due to pressure exercised upon that nerve, in some part of its course, or to lesion of its structure. The author attributes to some form of otitis those cases of paralysis unaccompanied by otorrhœa, and remarks:

> Independently of the cases of well-marked facial paralysis, such as those detailed in the foregoing section, I have frequently observed a trivial affection of the nerve in connexion with aural disease, which had evidently commenced by inflammatory action in the tympanum, or its external membrane. In such cases, if we stand directly opposite the patient, while the face is in a state of rest, there is no twisting of the mouth, nor any paralytic condition of the eyelids, but the cheek looks slightly fuller than that upon the opposite side; and the ordinary wrinkle, or curved indentation, extending from the corner of the nose to a point a little external to the commissure of the lips, is either altogether deficient, or not so well marked as that upon the opposite side; and if we engage the patient in conversation so as to bring the muscles of expression into view, all the foregoing appearances become exaggerated. I have seen many such cases, where this symptom had not been observed by the patient or his friends, or his medical attendant.

Catarrhal and Chronic Inflammation of the Middle Ear are the results of the extension of this form of disease from the throat, the symptoms of which are partial deafness, from the accumulation of mucus in the middle ear, often relieved by blowing the nose, noises in in the ear, &c. In the treatment of this disease, the author objects to the introduction of bougies through the Eustachian tube; gaseous or aëriform injections may be of service by improving the condition of the lining membrane, but in no other way.

> Slight local depletion, repeated from day to day, by means of a few leeches applied on the external meatus in the early stage of the disease, the use of counter-irritation, by means of blisters, over the mastoid process, and subsequently painting that part with strong tincture of iodine; the use of astringent gargles, particularly of the preparations of alum, so long as the throat exhibits symptoms of disease, will be found most efficacious. I believe the act of gargling is in itself highly beneficial, I presume by the way in which it acts, through the muscles of the pharynx and palate, upon the Eustachian tube. The

application of a strong solution of nitrate of silver to the throat, every second or third day, considerably assists in the treatment. I am inclined to think that its action is not confined to the part to which it is applied, but that it exercises a beneficial influence upon remote portions of the same structure, even the mucous lining of the middle ear. There is generally derangement of the digestive organs accompanying these affections: the tongue is usually flabby, white, and its edge indented with the teeth; the bowels are irregular; the patient complains of acid eructations in the morning; the face is pale, the skin cold, the spirits depressed, and the patient altogether in that condition denominated "dyspeptic." This is, I presume, the form of the disease described by some writers as "stomach deafness;" and in such cases the state of the digestive organs demands attention: but if we confine our treatment to the removal of the dyspeptic symptoms, without employing such local means as I have described, we shall be allowing valuable time to pass by, and when we have exhausted an extensive range of treatment in "setting the stomach to rights," we shall find the aural disease no better than when we began. In other cases the general health appears to be unimpaired.

The general treatment, consisting chiefly of gentle alteratives and tonics, such as I have recommended in cases of subacute and strumous myringitis referred to at the commencement of this section, are equally applicable in the present case. In some females the muriated tincture of iron, given in combination with the bichloride of mercury, is more beneficial than in any other form of aural disease. I have not found the hydriodate of potash as useful in this disease as when the fibrous structures of the ear are affected. It is, upon the whole, an uncertain remedy; and although it occasionally makes what is called "a hit," it very frequently disagrees with the stomach; and, by producing iodization, it rather increases the relaxation and humidity of the mucous surface, which it is intended to benefit. In children and young persons, the iodide of iron, given in the form of syrup, is generally beneficial, and may be continued for a long time. Where aperients are required, small doses of blue-pill, the watery extract of aloes, and taraxacum, will be found a useful combination. A dry, warm atmosphere is not only most agreeable to the patient's feelings, but materially improves the condition of the ear. When the membrana tympani exhibits evidence of thickening or opacity, it should be treated with nitrate of silver, as I have already explained.

In Chapter VII., the author considers the *Diseases of the Internal Ear*, and the principal part of it is devoted to *Nervous Deafness*. The statistics of this form of deafness, according to different authors, stand thus: Kramer found in 2000 cases of disease of the ear, 1028 of nervous deafness; Wilde in 2385 found 114 cases of nervous deafness; and Clarke gives, in 140, 34 of the latter disease. This great discrepancy of authors is owing to a difference of opinion as to what constitutes nervous deafness. Dr. Kramer found in nearly all of his cases "the membrana tympani white, like paper, and opaque," a pathological condition, according to our author, consequent upon some form of inflammation, and sufficient to account for the existing deafness. Mr. Wilde, on the contrary, considers those cases entitled to the appellation Nervous Deafness, in which no pathological condition is discoverable in the auditory apparatus. The dissections of Mr. Toynbee (*Med. Chir. Trans.*, vols. xxiv., xxv., xxvi.,) confirm the correctness of our author's views, for they exhibit, in a striking but demonstrative manner, the almost constant traces of inflammatory disease in the membrana tympani, middle and internal ear of subjects known to have suffered deafness.

Nervous deafness, according to Mr. Wilde, is more frequently hereditary than any other form of ear affection, excepting deaf-dumbness.

The subjects of it are generally of a sallow complexion, of a phlegmatic disposition, with a thin, cold skin, and languid circulation, and some are said to have a low state of sensibility of the auricles. In most cases the patients hear better when travelling in a carriage, or whereever they are exposed to a certain amount of noise attended with increased vibration; but this is occasionally observed in other forms of ear disease. The disease commences insidiously, and is often more frequently remarked by the friends than by patients themselves, who are usually most unwilling to admit the possibility of their not hearing as well as other people. Many deaf persons trace back the first accession of disease to grief, affliction, sudden mental emotion, to a shock, or to some great calamity. In many cases it first appears after childbirth; but it ordinarily comes on between twenty and thirty-five years of age. It generally commences on one side, but sooner or later extends to both ears, although the patient almost always hears better on one side than the other. It is strange, but nevertheless true, that in general the musical ear remains unaffected; persons will play in perfect time who can scarcely converse. In nervous deafness, especially in females, the patients invariably hear worse on being in any way excited, as by suddenly seeing a stranger undergoing a medical examination, &c. I think males hear rather better after dinner. Both suffer much from depressing emotions. Tinnitus aurium, so common an attending symptom on every form of aural and many cerebral diseases, is a frequent but not an invariable companion of nervous deafness. It may exist at the commencement of the disease, and be lost in after life; but, except under excitement—and in the majority of such cases I believe the disease is cerebral—it seldom supervenes.

The treatment of this disease should be according to the cause. Mr. Wilde has no faith in the injection of acetous ether into the cavitas tympani, as recommended by Dr. Kramer, or indeed in any topical application whatever. Counter irritation behind the ear, the judicious use of mercurials long continued, and the improvement of the general health of the patient, are the means best calculated to effect favorable results.

The concluding chapter is upon *Otorrhœa.* This symptom of disease of the ear comes more frequently under the treatment of the practitioner than any other aural affection. Mr. Wilde met with it once in every three and a half cases. We need not here review the causes of this affection; it is but the sequela, for the most part, of some one of the forms of disease already described. The author, however, gives a very complete and practical history of the disease, and its treatment. We have space only for the following upon its treatment:

> In simple external otorrhœa, I generally paint the surface engaged with a solution of nitrate of silver, ten grains to the ounce, with a fine camel's hair pencil, or a bit of cotton on the end of a probe, which I find far preferable to the old practice of dropping in the solution; as, by thus rubbing it on the parts, some more and some less, according to their condition, it removes a quantity of the mucous discharge, which adheres with great tenacity, and thereby makes its effect more certain; it may also be required on some particular spots only; and moreover, by this method, the concha, external parts, and the dress, are not blackened by it. This application should be repeated every second day, and, in the interim, the ear should be syringed night and morning, and even oftener, if the discharge accumulates, with plain tepid water, from a gum elastic bag, which, when used by friends or attendants, or the patient, is much preferable to the usual piston syringe; and at night a slightly astringent lotion may be poured into the ear till it fills up the meatus, allowed to remain there for a few minutes, with the head bent to the opposite side, and then permitted to run out. The syringing must not, however, be overdone: as soon as the discharge begins to moderate, it should be had recourse to less frequently; for if not, it will, particularly in the hands of attendants, serve to keep up the irritation.
>
> The various salts which enter into the general composition of eye collyria are here particularly applicable, especially those of alum, lead, zinc and copper. I formerly employed the lead lotion very extensively, but I have found that it frequently, without coming in contact with diseased bone, produces a blackened discharge: when it is used, the liquor plumbi will be found the safest and most efficacious preparation; and the lotion may be preserved clear, and either rose or elder-flower water employed, by the addition of a few drops of acetic acid. The liquor aluminis composition of the London Pharmacopœia is that which I now most frequently prescribe. Solutions of tannin will also be found most useful astringents.
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> If upon examination we find the meatus thickened, and it and the surface of the membrana tympani pink and vascular, a leech or two, according to the age and strength of the patient, should be applied every third day, several times. When the discharge is fetid, a chlo-

ride of lime lotion used occasionally is of service, being slightly astringent, and correcting the disagreeable smell.

With regard to cleanliness and syringing, so very much depends upon it, particularly among the lower orders, that the surgeon never can sufficiently impress its importance upon the patient or the attendants. In simple mucous discharge without polypus, granulations, or affections of the deep-seated structures, it is the chief part of the treatment; and yet how difficult to have it performed regularly! Allowing the discharge to accumulate is undoubtedly one of the principal means of perpetuating otorrhœa in any of its forms. When the meatus becomes a secreting cavity, with ulceration of its walls, it resembles a fistula, and the longer it has existed the more difficult it is to heal; and this fistulous character, especially in a narrow passage, promotes the continuance of a slight thin discharge, even long after the granulations or other producing causes have been removed. The action of the external air, therefore, upon this secreting surface, similar to what it experienced in health, can never be too much observed. There is, however, a very general prejudice to the contrary; for in two-thirds of the cases of otorrhœa which I am called on to treat, I find the orifice of the meatus filled full of cotton or black wool, which, if treatment be employed, is invariably restored to its position after each syringing. Some time ago I was consulted on account of a discharge from the ears of Master C.; it was then of two years' standing, and was thin and whey-like. He had been under medical treatment during the entire course of the disease; generally made use of syringing, and an astringent wash; never ceased to take tonic mixtures and aperient powders, and had resided twice at the sea-side. On examination, I found the auditory passages converted into secreting cavities, but without fungi, granulations, or caries, and with the tympanal membranes still perfect, but I learned that he had worn plugs of cotton in his ears ever since the discharge commenced; and these were only removed once in every two days in order to syringe and apply the lotion! By throwing aside the plugs, syringing twice a day, and continuing the same astringent applications, the child was cured in a month. It is scarcely necessary to add, that the moment the ear-passage becomes a muco-secreting surface, all traces of cerumen vanish, and it is not in the generality of cases until months after the discharge has ceased that the wax reappears.

With regard to general treatment, a very remarkable difference seems to exist in this country in relation to the management of the diseases of the eye and the ear; that of the former being of too local a nature, while that of the latter is almost exclusively constitutional. How frequently do we see a case of pustular or rheumatic ophthalmia, with a foul, white, loaded tongue, treated by a caustic solution dropped into the eye, or an astringent lotion applied to the eyelids—while a case of otorrhœa, without any derangement of the digestive functions or general health, is recommended tonics, sea-bathing, blistering, and an issue in the arm. If the case is curable,—for it must be borne in mind that only a certain number of those presenting with discharge from the ear are amenable to treatment,—and that we have fully ascertained the cause and source of the otorrhœa, and have reason to believe, from the appearance of the patient or the history of the case, that the state of constitutional health assists to keep up the local disease, we should by every means endeavor to act on the system. Cod-liver oil, and Peruvian bark are the remedies which I have found most conducive to this end: the former as an anti-strumous fattener; the latter by altering the established tendency to morbid secretion; but notwithstanding that otorrhœa of long standing is reputed to be entirely a constitutional affection, I have seldom occasion to prescribe any course of alterative medicine, unless in cases of marked strumous habit, and when the glands of the neck are diseased. With regard to "drains" and counter-irritation, we may insert an issue in the arm, if only to meet the prejudices of the friends or medical attendants; but sometimes cases occur that of themselves not only warrant but demand such a precaution; for instance, where disease of the brain had appeared in other members of the family, or that the aural discharge had broke out on the subsidence of disease of the skin or any vicarious outlet, or that the child had had convulsions in infancy, etc.; but these are the exceptions to the rule.

Towards the close of an otorrhœa from simple chronic otitis, especially in children, I have frequently remarked, that they are liable to fresh attacks of otalgia, and sometimes small abscesses form round the mouth of the meatus. These are, I believe, best warded off by the application of a vesicating liniment behind the ears, and keeping up gentle counter-irritation for some little time after the otorrhœa has ceased. For this purpose the croton oil dissolved in soap liniment, or the tincture of iodine, made stronger and more soluble by the addition of a little hydriodate of potash or the acetum lyttæ, answers very well.

Among the complications of otorrhœa are polypus growths, caries of the bony case of the ear, facial paralysis, and cerebral affections, all of which are individually examined by the author.

Mr. Wilde very appropriately devotes the concluding portion of his volume to the subject of deaf-muteism, and gives a very complete account of the past and present condition of the unfortunate subjects of deaf-dumbness.

We have now completed the examination of this interesting work, and trust that, from our explanations and quotations, the reader will form a not incorrect estimate of its literary and practical character. We are satisfied that it is eminently suited to the wants of the general practitioner in this country, where diseases of the ear have been so little investigated, and where a work of this completeness is not soon to be written on aural surgery. Its republication is therefore timely, and we cordially recommend it to the attention of the profession.

In the preceding pages we have purposely occupied the space allotted us with the work of Mr. Wilde, not because of its superiority, as a literary performance, to the work with which it stands associated, but solely from the greater interest which attaches to the subject. We cannot therefore dwell upon the treatise of Mr. Walton with that minuteness which we could otherwise wish, and shall be able to give little more than an outline of the work.

We agree with the editor, Dr. Littell, that there was need of a treatise on operative ophthalmic surgery, written in the light of modern science. Of the author's capacity to perform the task, if we had no other evidence, the work itself affords the best and most satisfactory proof. As the pupil of Tyrrel, Scott, and Dalrymple, and as surgeon to an extensive ophthalmic hospital, however, Mr. Walton seems peculiarly qualified to furnish a work on ophthalmic surgery, scientifically and practically written, in the light of modern science.

The following are the subjects treated of in the several chapters: I. The Use of Chloroform in Ophthalmic Surgery. II. Ophthalmic Instruments in general. III. Injuries from Mechanical or Chemical Agents. IV. Foreign Bodies on the Surface of the Eye; Larvæ of Insects under the Lids; Foreign Bodies within the Eyeball; Ossification of the Ocular Tissues. V. Affections of the Eyelids; Diseases of the Lachrymal Passages. VI. Affections of the Puncta; the Canaliculi, and the Lachrymal Tube. VII. Caries of the Orbit. VIII. Nævi Materni; Dilated and Tortuous Veins; Aneurism by Anastamosis. IX. Incisions of the Conjunctiva in Chemosis. X. Strabismus or Squint. XI. Tumors. XII. Protrusion of the Eyeball. XIII. Staphyloma. XIV. Conical Cornea. XV. Removal of Opacities of the Cornea by Operation; Transplantation of the Cornea. XVI. Cataract. XVII. Entozoa within the Eyeball; Cysts within the Chambers of the Eyeball. XVIII. Artificial Eyes. XIX. Malignant Affections of the Eye. XX. Artificial Pupil. XXI. Extirpation of the Eyeball.

With this enumeration of the subjects considered, and the assurance that each one is thoroughly discussed and illustrated by clinical cases, and, when requiring it, well executed wood-cuts, we must conclude our short, and necessarily imperfect notice of Mr. Walton's excellent volume.

BIBLIOGRAPHICAL NOTICES.

ART. XII.—*Lectures on Surgical Pathology, delivered at the Royal College of Surgeons of England.* By JAMES PAGET, F. R. S., lately Professor of Anatomy and Surgery to the College; Assistant Surgeon and Lecturer on Physiology at St. Bartholomew's Hospital, London, 1853. 2 vol. 8 vo, pp. 499 and 637. Philadelphia: Lindsay & Blakiston, 1854, pp. 699.

THESE Lectures are a rich contribution to the present advanced stage of Pathological Science, and they hold the same important and highly practical relations to the knowledge and treatment of disease as were held by the great work of the immortal HUNTER *on the Blood, Inflammation, and Gunshot Wounds.* Like Hunter, Mr. Paget is a close student of Nature, an accurate observer, a lucid and candid writer, and a true philosopher. These Lectures were delivered at the Royal College of Surgeons, during the six years from 1847 to 1853; and the author informs us that the plan and the subjects of the Lectures were based upon his studies in the Pathological Museum of the College, that monument to the genius and industry of Hunter. He remarks that "the first portion of the Museum, devoted to the illustration of general pathology, seemed to offer the best plan by which the knowledge acquired by a long study of the whole collection might be communicated.

"The modes were many in which such a subject might be treated in Lectures; but as circumstances had decided the subject, it seemed well to let them determine, also, the method, and to adopt that which was most natural to one engaged in the simultaneous practice of surgery and teaching of physiology. Thus guided, I designed to give Lectures which might illustrate the general pathology of the principal surgical diseases, in conformity with the larger and more exact doctrines of physiology; and the plan seemed the more reasonable, because it was the constant design of the great founder of the Museum.

"The Museum limited while it indicated the subjects of the Lectures. They were, therefore, not constructed to form a system of surgical pathology."

The following are the pathological studies included in these Lectures:—*Hypertrophy, Atrophy, Repair, Inflammation, Specific Diseases, Tumors, Tubercle.*

Upon each of these subjects our author has brought to bear all the light reflected from the vast pathological collections and cabinet of facts which he has enjoyed such peculiar facilities for studying, while he has carefully availed himself of the knowledge hitherto attained by his coadjutors in the great field of pathological investigation. In such labor, Mr. Paget displays many rare excellencies, by which many of his learned cotemporaries should profit. He is very careful and judicious in his selection and statement of the facts from which principles are to be deduced; whenever there are doubts or conflicting opinions, he scrupulously gives them the fairest statement; he attentively interrogates Nature, and unveils the simplicity of her processes; and finally, though he is preëminently learned in microscopy and all the modern advancements in science, he does not allow his mind to be dazzled or misled by the gorgeous light with which they have irradiated the whole field of our knowledge of Nature and disease; but he attempts so to focalize this light as to put every doubtful point to the severest test of which it is susceptible from such agencies, thus relieving many questions of much doubt, or settling them finally, so far as these means of investigation are concerned. Like all truly learned men, Mr. Paget has no love of high-sounding or new names, but he writes in a pure and lucid style; and, with a profusion of clearly-stated and apposite facts and illustrations, he labors to throw a flood of light upon every subject which he discusses.

As these Lectures, now republished in this country, should be read by every member of the profession, we will not attempt an extended analysis of them.

Art. XIII.—*An Account of the Origin and Progress of the Epidemiological Society, and the Address of its President.* London. 8vo pamphlet.

This small pamphlet we have read with equal surprise and gratification. It is probably known to most of our readers that a society has been established in London, under the auspices of a number of distinguished men, both professional and laymen, for the purpose of investigating the causes, the habitudes, the period of incubation, the contagiousness, the methods of treatment and cure, the prophylaxis, and all other points of interest, relating to *epidemic diseases.* In this term are not only included those most popularly known as epidemics, such as yellow-fever, typhus fever, cholera, &c., but all others which may in any way be regarded as general in their origin or progress, such as smallpox, scarlatina, diarrhœa, dysentery, hooping cough, &c., &c.

The investigation of these important subjects has heretofore been left almost exclusively to unaided individual effort, and hence the failure, as is believed in too many instances, to discover the general laws by which a great number of these zymotic maladies are governed. The good influence of such an *associated effort* for the investigation of these important matters may be seen almost at a glance. It is, perhaps, simply for want of such an effort, that the medical profession is so greatly divided in opinion, and hence is so feeble in its influence upon governments and legislators, in questions which so nearly and dearly affect the best interests of humanity. There are certain investigations which can best be left to the care and study of isolated individuals, such as mathematics, logic, ethics, &c., but there are many others which can only be thoroughly investigated by associated effort, such as geology, which depends for accuracy upon the observations made by different investigators in different parts of the world, from which the *truth* can only be determined by a comparison of results. So also is it with astronomy, which requires the observation of several individuals not only in different places, but in different years, and even different centuries, to determine its laws with precision.

"In the science of medicine," says the learned president of the society, B. Guy Babington, M.D., "the two methods are pretty equally blended; for so varied are the facts on which it is founded, so infinitely modified by a thousand different circumstances, that it requires the combined efforts of many to amass a sufficient stock of information to enable us to discriminate that which is essential from that which is accidental, and thus to arrive at trustworthy results. So far indeed as medicine partakes of the nature of exact science, that is to say, in its chemical, its anatomical, its microscopical, its pathological elements, it may be studied and advanced by individual efforts, and new truths may be worked out in the retirement of the study or the laboratory. But where it is only conjectural, and not reducible to exact rule and precise results; where, from the imperfection or complication of our data, we must have recourse to the probable instead of the certain; where we must balance chances, estimate averages, and strive to reconcile conflicting evidence,—there must we act in combination for the attainment of our object, since the experience of no individual is adequate to furnish a sufficiently broad basis on which to establish a general law."

The highest earthly interests of humanity are involved in these questions, and it is no less the duty of the general public than of our profession that the objects contemplated by this society should be fostered and encouraged in every possible way; and it appears that in London this aspect of the question is recognized, and to some extent appreciated, if we may judge from the fact that the society embraces among its supporters and laborers many lay individuals. Would not such an association among us be productive of great and happy results? A Hygienic Society here, which would examine all those matters which affect the health and lives of human beings in this city alone, would find work enough for considerable numbers, and by the result of its labors, obtain an influence in the proper regulation of health measures, and the enactment of sanatary laws, which would be of incalculable benefit to the commercial prosperity of the city, and the happiness and comfort of every inhabitant. J. H. G.

ART. XIV.—*A Practical Treatise on the Diseases of Children.* By J. FORSYTH MEIGS, M. D., Lecturer on the Practice of Medicine in the Philadelphia Medical Association, etc., etc. Second edition, revised and enlarged. Philadelphia: Lindsay and Blakiston. 1853. 8vo, pp. 711.

The first edition of this work constituted one of the series of the "Medical Practitioners' and Students' Library." The present edition has received many valuable additions, which, we are confident, will add to its deserved popularity with the profession, as a practical work on the diseases of children.

ART. XV.—*Hallucinations; or, the Rational History of Apparitions, Visions, Dreams, Ecstasy, Magnetism, and Somnambulism.* By A. BRIERRE DE BOISMONT, Docteur en Médecine de la Faculté de Paris; Directeur d'un établissement d'Alienes, etc., etc. First American from the Second Enlarged and Improved Paris Edition. Philadelphia: Lindsay & Blakiston, 1853. 8vo, pp. 553.

To those who sympathize "with the grand creed of supernaturalism" this will prove an interesting volume. As a philosophical treatise on mental pathology, however, it possesses but little to commend itself to our perusal.

ART. XVI.—*A Treatise on the Venereal Disease.* By JOHN HUNTER, F. R. S. With copious additions, by Dr. PHILIP RICORD, Surgeon to the Hôpital du Midi, Paris, etc. Edited, with notes, by FREEMAN J. BUMSTEAD, M.D., Physician to the Northwestern Dispensary, New-York. 8vo. pp. 520. Philadelphia: Blanchard & Lea. 1853.

THE original treatise of John Hunter, *on the Venereal Disease*, published in 1786, has considerably enlarged by the addition of notes and emendations of successive generations of editors. Nor does this growth seem to have been unhealthy. From a somewhat attentive examination of the volume, we find little to which judicious criticism would take exception. It is fitting that the investigations of Hunter, which removed the rubbish and laid the foundations of a rational and scientific syphilography, should form the basis of a work on the venereal disease. And it is no less proper that the researches of Ricord, who has reared upon the foundation thus laid the majestic superstructure of a rational syphilitic pathology and therapeutics, should be added as a commentary on the text of his great predecessor. To the present edition we have superadded the notes of the English editors, Home and Babington, and the American editor, Dr. Bumstead; the former being essential to the illustration of the views of Hunter, and the latter to bring the practical portions of the work down to the present period.

We regard, therefore, the publication of this work in its present form, embracing as it does the views of the two most successful students in this speciality—one writing at an early, the other at a later day, but both pursuing the subject in the same inductive method—as timely and appropriate, when so much attention is being given to this department of medicine.

PART THIRD.

FOREIGN MEDICAL RETROSPECT.

PRACTICAL MEDICINE.

Of Acute Peritonitis and its Diagnosis in Infants at the Breast. By Dr. ISIDORE HENRIETTE, Physician to the Foundling Hospital of Brussels. [*Jour. de Med. de Bruxelles.*]—The great frequency of affections of the system of serous membranes in infants at the breast, is a subject worthy of the deepest consideration of those who devote special attention to the study and treatment of the diseases of children. The peritoneum, the pericardium, the pleura, the meninges, far more frequently than is believed, present pathological alterations which prove the peculiar tendency of these exhalent organs to become effected in children of early years. With the exception of meningitis, the symptomatologic manifestations of which are usually striking, these diseases are diagnosed with difficulty. We do not mean to say that pleurisy, pericarditis, and inflammation of the peritoneum can only be recognized after death, but that the functional disturbances which they create are frequently so slight as to require on the part of the physician the greatest attention.

We shall attempt to extricate the latter disease from the obscurities which surround it, by coördinating the elements of its diagnosis which have been furnished by authors, and describing what we have observed ourselves. We shall establish, finally, its differential diagnosis from entro-colitis, a frequent disease of infancy which may be readily confounded with peritonitis.

In the first place, if we seek for the cause of idiopathic peritonitis in young children we are quickly at a loss. Its sudden development is not the least strange peculiarity of this affection. We know that in the adult spontaneous peritonitis is rarely observed, and that it is ordinarily encountered only in those peculiar conditions which are produced by the puerperal state, by traumatic lesions, and by perforations of the digestive tube. Its etiology, then, is most uncertain. In the two cases which have occurred in our service, without having recourse to suppositions and hypotheses, no cause could be inferred; it is important to mention that there was nothing abnormal in the umbilical cicatrix.

In the adult, the symptoms of peritonitis are well marked: it is difficult to mistake them; the symptomatology is so plain, that without a want of experience that can only be admitted in young persons upon their entrance upon the profession, it is impossible to avoid a rigorous diagnosis.

Is it so in infants? No. Here we are destitute of the information afforded by the patient; here the disease is not reflected, as in the adult, by the contracted face, the small, corded, peritoneal pulse. Pain upon pressure exists, indeed, and meteorism; but these two morbid manifestations occur also in affections of the intestinal tube, and yet in a great measure the diagnosis must be based upon them. It is therefore well to define accurately their conditions, their intensity and progress in peritonitis of young infants, as distinguished from entero-colitis.

The onset of peritonitis in infants is rapid; we cannot say whether it is preceded by shivering, as in adults, but we can assert that it is not announced by any prodromes. The patients that we have observed, enjoyed a satisfactory state of health until the very onset of the peritonitis. As far as we could perceive, until then they presented no unusual symptom.

Entero-colitis commences less suddenly; at first the child refuses the breast, or suckles with indifference for two or three days before the attack; then borborygmus occurs, and the evacuations soon manifest derangement.

In Peritonitis.	*In Entero-colitis.*
The abdominal sensibility is greater than in any disease of the abdominal organs; the child cries upon the slightest pressure.	The abdominal sensibility is less acute; slight pressure does not cause the child to complain.
Meteorism occurs with the greatest rapidity. At the very commencement of peritonitis the abdomen becomes tympanitic almost while we are looking at it, while, at the same time, dullness is established over the inferior or pubic region.	Meteorism occurs less rapidly and always bears a relation to the intensity of the abdominal lesion.
Vomiting is rare, and usually occurs only at the outset; the matters ejected are unmixed, very green, and stain a linen cloth.	Vomiting is frequent; the matters ejected are almost always mixed, and of a yellowish green color.
Constipation was a marked symptom in the two cases we observed.	Diarrhœa is an almost constant phenomenon.
The countenance is little changed; the eyes are more fixed than usual, perhaps; the plumpness of form is unaltered.	The countenance is rapidly altered; the eyes and mouth are surrounded by bluish rings: emaciation is rapid.
The child is motionless, and cries when it is moved.	The child frequently flexes its limbs upon the abdomen.
The respiration is entirely thoracic, and is greatly accelerated; the inspirations are short and incomplete.	The same symptoms occur but much less strikingly. The diaphragm does not remain motionless and passive as in peritonitis.

Such are the most striking symptoms which we have observed. They differ in some respects, particularly in regard to the appearance of vomited matters and of the countenance, from those described by Billard, almost the only physician who has carefully studied peritonitis, in children at the breast, or given a description of it at all complete. This is astonishing, for, since this author wrote, infantile pathology has been very extensively explored, and several masterly treatises have been devoted to it. In these, however, this redoubtable affection receives only a passing notice. Some persons may complain of our omission of the signs of peritonitis furnished by the general symptoms, and particularly by the pulse. We have not mentioned them because they are identical with those observed in other febrile affections.

CASE I.—*Acute peritonitis; death.*—A male child, forty-two days old, entered the hospital on the 25th of May, 1850. The lower limbs were covered by a papulous syphilitic eruption; a sero-purulent, sometimes sanguinolent, discharge oozed from its nostrils. In consequence of the obstruction of the nose, respiration was laborious and lactation difficult.

The child was placed upon mercurial preparations, and confided to a healthy nurse, and soon became fat and hearty. Towards the end of June the eruptions had disappeared, but the ozæna was not cured. The nurse, having conceived a great affection for the child, consented to take the bichloride of mercury in order to cure it. The results of this treatment were soon manifested; the child improved most rapidly.

On November 8th, the child became obstinate all at once, uttered cries, refused to take the breast; the face was flushed, the eyes fixed; vomiting of bilious matter occurred. The abdomen became enormously distended; it was hot; it could not be touched without causing the child to cry and to shed tears. Constipation; hurried thoracic respiration; high fever. (*Two leeches near the umbilicus, emollient cataplasms; laxative enema; diet.*)

The child cried all night, lying motionless in its crib.

On the 9th, more vomiting; one consistent dejection. The abdomen was very tense and painful. (*Protracted warm bath; four leeches to abdomen; emollients.*)

The child died in the course of the day.

Autopsy 24 *hours after death.* No emaciation. The peritoneal cavity was filled with a flocculent sero-purulent liquid; there were various intestinal adhesions. The peritoneum was highly injected; there was little or no redness of the intestines, the mucous membrane was healthy; the liver was covered by a purulent layer; the intestines were greatly distended by gas. No other organs presented the slightest alteration, except the nasal bones, which were thickened from periostitis. The umbilical cicatrix was complete, and without redness.

CASE II.—*Acute peritonitis: death.*—A new-born child was brought to the hospital, Nov. 17, 1852. It was a female, very small and feeble. The eyes were invaded by a grave purulent ophthalmia.

It was put under treatment for this affection, and for a stomatitis (muguet) which supervened shortly after, and, at the commencement of January, all of its functions were well performed, it had gained flesh, and would have left the hospital but for the inclemency of the season.

On the 14th of January, the child became cross, and cried when it was moved, and showed no inclination to nurse. The left lower extremity was œdematous, and was covered by erysipelatous patches. (*Hygienic precautions.*)

Jan. 16*th.* The erysipelas disappeared from the left limb, but invaded the opposite limb.

Jan. 18*th.* The inflammation abandoned the inferior extremities, and attacked the left side of the trunk and the lower part of the arm. In the evening there was bilious vomiting.

Jan. 19*th.* The abdomen became enormously distended; the child no longer vomited; the belly was hot, and excessively painful. The slightest touch made the little patient cry. There was dullness at the inferior portion of the abdomen, but fluctuation could not be perceived; the face was flushed, the eyes fixed, the inferior extremities motionless, the respiration incomplete, thoracic; one consistent dejection; fever. The erysipelas was still manifest on the arm. (*Four leeches to the abdomen; emollients; laxatives; diet.*)

The child died in the afternoon.

Autopsy.—Liver enormous, fatty, yellow. Sero-purulent liquid in peritoneal cavity; recent false membranes and adhesions of the intestines; a slight amount of purulent serosity in the left pleural cavity. The lungs, spleen, and intestines presented no pathological alteration. The cellular tissue of the left leg and arm were infiltrated by serum. There was nothing abnormal in the articulations.

Is this case the peritonitis was discovered during life. The case which preceded it had taught us a useful lesson.

We shall say nothing of the treatment of this disease, except that it is our intention, having derived so little benefit from antiphlogistics and emollients, to combine the mercurial preparations with these, when the occasion presents itself.

We are not, however, very sanguine as to the eventual result of this combined treatment, for death arrives so promptly in this disease, that we can hardly believe that constitutional therapeutical agents can have time to act.

Case III.—*Acute peritonitis; volvulus; death.*—Since we recorded the preceding observations, we have met with a third case of peritonitis in a newborn child, complicated with volvulus. This is its history:—

A female child, born at the Maternity, was brought to the hospice on the 22d of March, 1853, the seventh day after its birth. It was a large infant, of good constitution. Its body was covered by psoriasis guttata. Suspecting a specific cause, although we could not detect the opaline border which Biett regards as the pathognomonic sign of the venereal affection, we confided the child to a nurse who was already taking mercurial preparations for the cure of a syphilitic child whom she was nursing.

Until the sixth day after her admission, we observed nothing in the little patient; she nursed well, slept well, her functions were well performed, the eruption did not progress; but, on the 28th, we found a radical and menacing change in her situation.

The abdomen was tense; there was considerable meteorism, exquisite sensibility, dullness above the pubes, short and hurried respiration; the countenance was anxious; the eyes were fixed; the limbs were motionles; the child cried when was she moved; she had not urinated since the preceding evening; no vomiting; constipation; feverish pulse; cold extremities; the eruption had faded.

The catheter was passed, but it did not evacuate a single drop of urine. The child was placed in a hot bath, with the hope of bringing back the eruption; the abdomen was fomented, emollient injections were administered, and a table-spoonful of the syrup of manna.

In the afternoon of the 28th, the patient vomited yellowish matters resembling fæces to the eye, but inodorous. The psoriasis had completely disappeared. The little patient was expiring.

A catheter introduced into the bladder and also into the rectum brought away neither urine nor fæces. The diagnosis had been written over the patient's cradle:—Acute peritonitis and volvulus.

The child died, then, on the day upon which the disease commenced.

Autopsy.—Several of our colleagues and resident students of St. John's Hospital were present at the post-mortem examination.

The bladder was contracted, it contained not a drop of urine; the peritoneum was highly injected, and contained a turbid flocculent serum; the intestines were glued together by a grayish, semi-liquid substance; the small bowels were strangulated by bands of lymph; the ileum was invaginated; the rectum was empty, whilst the portion of intestine above the obstacle was filled with yellowish liquid. The convex surface of the liver was covered by false membranes; the spleen was enlarged. The lungs, kidneys, encephalon, heart, and other organs were normal.

This observation is interesting in several particulars. It confirms, in the first place, the description we have already given of the symptoms and progress of this disease; and it was accompanied by a phenomenon which is not mentioned by any of the physicians who have written upon the diseases of infancy, a complete suppression of the urinary secretion. As to the causes of this symptom, we can only speculate upon them. There is another important question in connection with this case. Can it be regarded as an example of spontaneous, idiopathic peritonitis? Many physicians deny such a disease altogether, but a careful examination of the above case seems to demonstrate its existence. In fact, the first symptom which appeared was the rapid distension of the abdomen, accompanied by the ordinary symptoms of peritonitis in children, with dullness above the pubes, whilst the psoriasis still preserved all its distinctiveness, and showed no tendency to disappear. A metastasis could have been inferred if the abdominal symptoms had followed the disappearance of the cutaneous eruption, but this was not the case.

We shall conclude these brief and incomplete remarks by insisting upon a capital fact, which we noticed in each of our three patients: the rapidity with which effusion and the organization of false membranes occurred. As soon as pain and meteorism were discovered, percussion indicated that effusion and purulent agglutination had also taken place. We have not spoken of fluctuation, because we were unwilling to resort to the manœuvres necessary to detect it, in consequence of the extreme pain which they would produce.—*Virginia Med. and Surg. Jour.*

On the Application of Tincture of Iodine as an Ectrotic Remedy in Smallpox. By J. Crawford, M. D., Professor of Clinical Medicine in McGill College, Montreal.—It is now upwards of nine years since I first recommended the application of tincture of iodine as an ectrotic remedy in smallpox, and although I observe that the suggestion has been noticed by Dr. Copland, in his Dictionary of Medicine, and by Dr. Dunglison, in his work on Therapeutics, and also by some others in the United States, I would nevertheless desire again to draw the attention of the medical profession to the benefit that a more extended experience has convinced me would follow a general application of the remedy.

Epidemics of the dangerous malady of smallpox have been fortunately rare amongst us, and therefore the opportunity of further testing this remedy had not been afforded me, till the latter end of the last year, and earlier months of the present, during which period I have had occasion to treat, both in hospital and private practice, several cases of very grave variolous disease, and would desire to lay my further experience before the profession, anxious that a fair trial and just estimate of the application should be made, while I feel fully confident that it will maintain the reputation I have deemed it deserving of. I would here appeal to those who have seen much of the natural smallpox, or its effects, how few cases escape pitting and unseemly scars, when the disease is allowed to run its course without interference, and I would also ask, how many attempts have been made in consequence, to supply an ectrotic remedy, and how difficult of application, or disagreeable, and even inefficacious, are any that have been hitherto recommended. The Herculean undertaking of cauterizing the several individual pustules, in severe cases, quite precludes its application. I have reason to think the compound tincture of iodine a very powerful and efficacious remedy, which has been tried with very satisfactory results in the Montreal General Hospital by my friend Dr. Campbell, but from my being under the impression that the addition of the hydriodate of potass caused more pain, I have not employed this form. The disagreeable mercurial mask, the inefficacious covering of gold-leaf, cotton, or collodion, are now in a great measure laid aside. I stated formerly, on the occasion of my first suggestion of this application in the Medical Gazette published in this city in 1844, that I was led to try it in smallpox, from the very marked benefit I had derived from its use in erysipelas, and various other cutaneous diseases, for several years previously. I was then satisfied of its *antiphlogistic* powers and *soothing* effects, and trusted that a more general employment of it in variola would establish its claims to general confidence.

During the late epidemic of variola, I have had several opportunities of trying its powers, and my cases have been observed by many members of the profession, to whom the issue has afforded every satisfaction. I have reason also to know that several medical practitioners have followed my example with success, while others have made only a very *imperfect* and *insufficient occasional* application, which neither could afford a satisfactory result, nor determine the advantages derivable from it. I have been favored with the opinion of several physicians of this city, of the highest standing in the profession, on the advantage of using this remedy, which I subjoin. The application I have used is a saturated solution of iodine in spirit of wine, *which is to be brushed freely over the face once or twice daily, from the earliest day of the eruption that is practicable, and continuing the repetition of the application daily, or oftener, during the period of the maturation of the pustules. The earlier the application is commenced, the more efficacious it proves. The inflammatory and ulcerative processes are controlled, and the intolerable itching relieved*, by which means *scratching*, and its evil consequences, are obviated. For some time I was disposed to confine the application to the face, as being the part most disposed to ulceration and pitting, as well as that most desirable to be preserved from marks. I have, however, on many occasions applied it to various other parts, for the sake of experiment, or contrast, and also to relieve the intolerable pruritus, and have even extended it over nearly the whole body, at the patient's desire, without any evil consequence or inconvenience from the most extended application. The relief it affords to the itching (if it conferred no other boon) would of itself be a sufficient recommendation of the application. Its antiphlogistic and febrifuge properties, however, are very manifest, and I have no doubt *modify* and *moderate* the *fever*, and thereby operate in a most salutary manner. The medical treatment I have combined with it is so simple and mild, that a great deal cannot be attributed to it; being merely small doses of calomel and Dover's powder occasionally, during the day, and at night, as a sedative. When pits are left, I have observed that they principally occur in the nose, and I am inclined to think that this may in some degree be owing to the insufficiency of the application to this sensitive part, or from the disagreeable vapor causing irritation of the schneiderian membrane, or eyes, which makes the patient more desirous to escape from its application; but even this inconvenience may be easily obviated by keeping the eyes shut, and, if requisite, stopping the nostrils.

The immediate effect of the application is pain, which is more complained of by some than by others. It speedily subsides, and gradually abates in severity, after the first few applications; and the relief to the itching it affords is so gratifying to the patient, and the effects so manifest to the friends, that they always remark the contrast of the parts "painted," with those left "unpainted;" and frequently request a further extension of the application.—*Montreal Med. Chron.*

On the Local Application of the Vapor of Chloroform.—In an article in the *Dublin Quarterly Journal*, Dr. Hardy gives several examples of the application of the vapor of chloroform to the vagina and neck of the uterus, in painful affections of these parts, by means of an instrument which he has invented for that purpose. The following are his conclusions:—

"In observing the effects of chloroform as applied locally in the form of vapor in the above cases, I have endeavored to obtain as correct a notion of it as possible, in order that a true estimate might be arrived at of its value as a remedy. Besides the cases here recorded, I have applied the vapor locally in various other forms of irritation. One of these in particular I was anxious to know its action in—namely, *pruritus pudendi*, a disease exceedingly troublesome and unpleasant to the patient, and for the relief of which she is often very reluctant to ask a remedy until forced to do so. I have used it in a case of this kind in the person of a very intelligent patient, who for a length of time had been annoyed, particularly on the approach of a menstrual period, by this distressing complaint, for which she had made use of various remedies. The vapor of chloroform, she informed me, afforded her relief from her uneasy sensations. On referring to one of the cases (Case v.) detailed, it will be seen that there was a very severe sense of scalding in the vagina, which seemed to depend a good deal on uterine irritation. Knowing the heat caused by the vapor of chloroform, I feared this patient should have suffered severely from its application; but, on the contrary, she was quite relieved of it; so in *pruritus pudendi*, arising from a similar cause, the like results have been obtained as in her case.

"If future investigation as to the effect of the vapor of chloroform when locally applied coincide with the results already observed in the series of cases herein detailed, it seems reasonable that the following conclusions be considered deducible:—

"First. That in many forms of disease attended with pain or irritation the local application of the vapor of chloroform will frequently act as quickly in affording immunity from suffering as though inhaled in the usual manner.

"Secondly. That the vapor locally applied is not attended with any unpleasant affects (save the sensation of more or less heat) either at the time or subsequently, and is therefore eligible under circumstances contra-indicating its use by inhalation.

"Thirdly. That as a remedy, its local application is preferable to the use of opium and most narcotics in spasmodic and painful affections, particularly of the uterine system, owing, first, to its freedom from causing derangement of the digestive organs, and secondly, to its greater rapidity of action."

On Chronic Excoriations of the Tongue of Children. By FREDERIC BETZ. (*Dub. Quart. Jour.*)—PROFESSOR MÖLLER, of Königsberg, describes a chronic desquamative process of the tongue, which he had observed in six cases.[*] The patients were middle-aged females. The excoriations appeared in the form of irregular deep red spots, for the most part sharply circumscribed, either altogether stripped of epithelium or very thin over them, while the hyperemic and swollen papillæ projected somewhat beyond the level of the surrounding parts. No morbid secretion could be observed on these spots, nor did any deep ulceration take place. They existed chiefly on the borders and tip of the tongue, more frequently on their under surface, and on the inside of the lips, never on the posterior parts of the mouth. They occasioned a troublesome sensation of burning, gave the patients a disgust for food, deprived them of the sense of taste, and interfered with the free motions of the tongue.

Dr. Betz observed a very similar disease in five cases in children, which he does not wholly identify with that described by Professor Möller, but the points of difference do not appear to be great. Perhaps Professor Möller may bring forward further communications on the subject, when he shall have had opportunities of observing his form of disease in children. A red spot of roundish or oval form appears on the edge of the point of the tongue, but never on its middle line, nor on the base, and is surrounded by a well-defined, often slightly elevated redder margin. This red, sharply defined spot increases from the edge inwards, extending in a curve, and when it arises behind advancing towards the tip. Dr. Betz has only seen it on the back of the tongue; but he has observed the spots in three situations at the same time:—on the left half of the tip and on both margins of the body of the organ, the remainder of the tongue being covered with a whitish fur. The tongue is not swollen or harder in these spots, nor does any secretion or ulceration arise. The little patients made no complaint, nor did the disease appear to be an object for treatment. The morbid process consists in an exfoliation of the horny epithelium of the papillæ filiformes,[†] splitting at its point into many thread-like processes,—a desquamation of the filamentary papillæ of the tongue. They consequently appear much lower on the red fleshy spot; even lower than the papillæ fringiformes. The spot so denuded is not painful to the touch. Each half of the tongue desquamates by itself; that is, the desquamation does not attack both halves at the same time, nor does it advance simultaneously on both. When the tongue has exfoliated, the process recommences after three, six, or eight days. I have watched these chronic excoriations during three years in a boy in whom they existed since an attack of jaundice, which occurred about four weeks after birth. The other patients were girls, the eldest of whom was eight years of age. In these children eczematous and impetiginous eruptions appeared from time to time on the face and on the head. As the disease occurs before detention, a bad tooth cannot be regarded as its cause. Dr. Betz could not perceive any influence on the motion of the tongue or on the sense of taste. Since the desquamation of the epithelium is connected with a hyperemia of the filiform papillæ of the tongue, but without the occurrence of ulceration, the author would be inclined to substitute the designation "Pityriasis linguæ" for that of chronic excoriation.—*Journal für Kinderkrankheiten.*

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[*] Deutsche Klinik, No. 26.

[†] See Kölliker's Gewebelehre, 1852. p. 351.

Chloroform in Hypochondriasis. (*Dub. Quar. Jour.*)—At the meeting of the College of Physicians in Ireland in June, Professor Osborne stated that he had lately, in two cases, opportunities of observing a peculiar effect of chloroform taken into the stomach, in controlling the depressing and saddening feelings belonging to hypochondriasis. Considering that state to be produced by a depraved sensibility of the stomach or colon, and frequently of both, he was led to the internal employment of chloroform, which, being promptly volatilized at the temperature of the stomach and before being decomposed by the process of digestion, ought to be expected to act as a local anæsthetic, even though the dose should not be sufficient to produce any change in the function of the brain.

The first patient who presented the conditions requisite for this experiment was a married woman, and a mother, aged 33, of a querulous disposition, as was well marked in her countenance, and who had been on a former occasion under his care and that of another practitioner, complaining of a variety of pains in the abdominal region; and she, although relieved, yet persevered in the belief that she still had some internal disease. She now appeared to labor under spinal neuralgia. After this had yielded to the application of nitrate of silver to the spine, and some other remedies, she still continued to feel an indescribable sensation of depression, and of internal annoyance, no longer to be referred to the spinal nerves;—no cause for it could be detected. The appetite was good, and the action of the bowels regular. In two days, after taking ten drops of chloroform thrice daily, she *began, for the first time, to acknowledge that she was better*, and in a few days afterwards was free from complaint. The second case was that of a caretaker in the Linenhall, aged 29. He complained of the deepest dejection of spirits, and of an uncontrollable aversion to make any exertion. His countenance expressed sadness and moroseness. All the functions were in a healthy state, except that the heart's action became tumultuous when excited either by emotion or exercise; but no organic disease could be detected. He stated that he had not been addicted to excess of any kind, and that there was no cause for his lowness of spirits. He got valerianate of zinc, and also pills to regulate his bowels; but although the heart's action became steadier, yet the depression and inward sensation continued the same. After taking twenty drops of chloroform thrice daily for two days, *he began to confess*, what he never did before, *that he was better*. His sleep being still unsatisfactory and disturbed by disagreeable dreams, he was ordered to take forty drops at bedtime. He now stated that he slept with a pleasing dream of seeing his brother, who had gone to America. During the two following nights he took the same dose; and, although his sleep was interrupted by the disturbance attendant on a man in a dying state in the same ward, yet when he did sleep his dreams were pleasant, being usually that he was enjoying the company of the most agreeable of his friends. He was dismissed with a marked improvement in his countenance, and *acknowledging that he was better*.

These cases are selected as being nearly free from complication. It must, however, be recollected, that there are several other uses to which chloroform may be applied in affections of the stomach and intestinal tube, but this appears to be one of the greatest value, inasmuch as no other medicine can be named which in this respect seems to come into competition with it. How far the effect is permanent and capable of completely removing the sensation of hypochondriasis, or in what degree it may require to be resumed or repeated, Dr. Osborne as yet has not been able to determine; neither did he think it necessary before this association to clear himself from the absurdity of bringing it forward as a universal *nepenthes*.

With regard to the mode of administering chloroform internally:—as its specific gravity is nearly 1·5, and it is insoluble in water, it must, when swallowed, soon settle at the bottom of the fluids in the stomach; and although it is votalized, yet being covered, and under pressure, it may remain in contact sufficiently long to irritate the stomach at the part of contact, as was proved to take place in the case of camphor by Orfila. Hence, then, it is desirable that it should be diffused or diluted before it is taken. In aqueous mixtures, even when shaken up, it soon falls, so that it cannot be equally measured out, and its pungency is annoying even to the mouth. In gum Arabic mucilage it soon collects in large globules at the bottom of the bottle, covered with a white powder of arabine which it has precipitated. To obviate this inconvenience it has been proposed to give it suspended in syrup, but to make a syrup of the same specific gravity 1006 grains of sugar to the ounce of water would be required, while that of the Pharmacopœia contains only 874 grains; besides, chloroform has a heavy sweet taste which renders the addition of syrup peculiarly objectionable. The menstruum which Dr. Osborne used in the above and other cases was the decoction of Irish moss (carrageen). With this chloroform forms a uniform mixture, and in the proportion of ten drops to the ounce they remain for an indefinite time without separation taking place. The taste of the mixture is sweet like that of a heavy syrup, to relieve which it may be well to add a few drops of some aromatic or bitter tincture. Another mode of avoiding the pungency of chloroform is by giving it in combination with tinctures, as it is soluble in alcohol, and remains dissolved even in proof spirit. The following is a specimen of this kind of formula, and is peculiarly grateful to the taste, and susceptible of various additions and alterations, according to the requirements of individual cases:—Chloroform, and tincture of ginger, of each half an ounce; aromatic spirit of ammonia, two drachms. Mix. Twenty-five drops to be taken thrice daily in a wineglassful of milk."

New Mode of preparing Ointment of Nitrate of Mercury.—We copy the following note from Mr. Wilde's recently published treatise on the *Diseases of the Ear:*—There is no other medicine in the whole materia medica so frequently prescribed by the practitioner which presents the same differences, both in appearance and effects, as the ointment of the nitrate of mercury. Prepared as directed in any of the pharmacopœias of the three kingdoms, it is impossible to procure it alike in any four different establishments. It is found of all shades of color,—straw-colored, gray, green, yellow, orange, and of every degree of consistence, dry and hard, or soft and pasty. If mixed with almond oil, as in diluting it into an eye-salve, it soon becomes green, and gets a very unpleasant swell, whether covered up or not; and in this state it is often very irritating. Many apothecaries in Dublin do not adhere to the pharmacopœial formula, but make it up according to a form of their own; some use fresh butter instead of lard; and others different kinds of oil, as from habit or experience they find best. On explaining my difficulties, some years ago, to Mr. Donovan, he procured me a citrine ointment of a very dark orange or brown color, soft, perfectly and equally smooth, and which does not alter in any way by keeping, by exposure to light, by mixing with oils, or even by being gently heated to the point of fluidity; and it never acquires an acid smell. Its therapeutic effects I have had long experience of, and they are decidedly superior to those of the ointment in common use, Mr. Donovan has not made known its constituents, nor its mode of preparation. Mr. Nicholls has made for me a citrine ointment precisely similar in color, smell, consistence, and effects; and he informs me that he uses rape oil instead of olive oil, and does not let the heat employed during the preparation exceed 200°. Mr. John Evans has employed cod-liver oil, and also seal oil, and the preparations thus produced are exceedingly elegant and useful ones. Mr. Carroll likewise uses cod-liver oil in the composition of this unguent. Messrs. Bowley have obtained for me a brown citrine ointment, somewhat like those already mentioned, and they inform me that it is by using only the very purest olive oil. I find this ointment a decided improvement on the old preparation, and its composition should be investigated by those engaged in the preparation of medicines and pharmacopœias. When about to be used, it should be melted to the consistence of cream by placing the vessel containing it in hot water. It forms an admirable application in ophthalmia tarsi, as well as in various diseases of the ear.

PART FOURTH.

AMERICAN MEDICAL RETROSPECT.

PHYSIOLOGY.

On the Modus Operandi of Fecundation. By WALDO I. BURNETT, M. D. (*Am. Jour. of Sci. and Arts.*)—With every inquiring mind there is a deep interest connected with the development of animal life. To watch the origin and rise of new forms, to trace the successive phases through which they pass, as the ideas on which they are based become more and more definitely expressed, until finally the perfect animal is produced,—these have been favorite studies from the earliest times with some of the most genial minds, and over which they were accustomed to dwell with increasing delight. But more interesting still, because more wonderful, is the study of those necessary preliminaries of all individual development—the mysterious conditions of fecundation. To observe, after nature has prepared the material, how she puts up a new structure, and to trace the adaptive idea in the lying of each part, require but opportunity united with careful diligence and patience. But to lift the veil beneath which lei hidden the more than mysterious relations of individuality, this is to tread on the confines which separate the material from the immaterial world.

There is no question in physiology so difficult and at the same time so interesting as—*How* is a new individuality started by the conjugation of the sexes; and where so little could be observed, there has been more scope for speculation.

In modern times, however, with certainly better instruments if not better opportunities, we have looked for less talk and more knowledge; and in this respect, it may be justly said that we have approached pretty near that boundary, which, as it is the limitation of that which can be perceived by the senses, it is the real confine between the known and the unknown in physical science.

As it would be profitless to notice the labors of those numerous men, who, in this department have written upon what they really knew nothing, yet speculated much, we shall attempt to show the state of our real knowledge on this *ultimatissimum* of physiology—the *modus operandi* of fecundation.

Modern histological studies have, we think, pretty definitely settled two fundamental and important points: 1st. That the ovum is, morphologically, only a nucleolated cell; and 2nd. That the sperm-cell is the true homologue of the ovum.

The ovum (fecundated) produces the embryo; the sperm-cell the spermatic particle. The embryo and the spermatic particle are the correlative representatives of the female and the male sex. One is the metamorphosed nucleus (vitellus) of the one; the other, the metamorphosed nucleus (nucleus of the daughter cell) of the other. In both, the ovum and the sperm-cell, the process of segmentation seems a necessary preliminary to the evolution of the new being.*

The strict correlation between the essential products of the sexes is as wonderful as it is beautifully suggestive of the unity and simplicity of plan by which nature proceeds. This point, so seductive in all its relations, might be dwelt upon in detail, but we will continue with main and general facts. The ovum, as a nucleated or nucleolated cell, continues to grow, and whatever size it may attain to by the endogenous formation within its capsule of new cells, yet, when complete, it is, (even though belonging to the *Ostrich* or *Epiornis*,) morphologically, only a great compound nucleated or nucleolated cell. All these conditions of origin, growth, and maturity, can be satisfactorily studied in the lower animals, and we would especially recommend the compound Ascidiæ for this purpose. The ovum, thus complete, is ready for fecundation.

We have already said that the sperm-cell is the analogue, or more properly *homologue*, of the ovum; its origin and development, as we have traced them in all their details, are precisely the same as those of the ovum. The sperm-cell increases to a definite size, its nucleus (vitellus) then regularly segments, 2, 4, 8, 16, &c., and the results of this segmentation are daughter-cells. The condition of the sperm-cell at this moment is like that of the ovum produced by the same process of segmentation. I mean the *mulberry-like* condition. But at this point there is a digression, for with the sperm-cell the nucleus of each of the daughter-cells is changed into a spermatic particle, while with the ovum, the whole mass is metamorphosed into the new being by a process of substitution.

The spermatic particle, then, is only a metamorphosed nucleus of a cell, and, perhaps, were the analogy carried out completely, each daughter-cell would be the representative of a miniature ovum.

Physiologically, the phenomena we have thus briefly described, obtain equally in the vegetable kingdom; for, as recent discoveries have shown, even in the simplest cellular plants, there is a conjugation of two kinds of cells, the product of which terminates in a new generation; in the other plants, the superior cryptogamia, and the phanerogamia, there are parts which in a developmental as well as morphological point of view, corespond to the essential male and female products of animals.*

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* See Researches on the Origin, Mode of Development, and Nature of the Spermatic Particles among the Four Classes of the Vertebrata.—*Mem. Amer. Acad., N. S.*, v. *pt.* i, 1853.

Throughout the organized world, therefore, the conditions which wait upon the true generative process are the same—the combination of the representative products of two distinct sexes—and these products, whatever may be said of their form, are always physiologically the same;—they are cells or cell-products.

Here we would make a general statement which embodies a great deal of physiology on this subject: A true generation must be regarded as resulting only from the conjugation of two opposite sexes, from a sexual process in which the potential representatives of two individuals are united for the elimination of one germ. The germ power thus produced may be extended by gemmation or by fission, but it can be formed only by the act of generation, and its play of extension and prolongation by budding or by division must always be within a certain cycle, and this cycle is recommenced by the act of the new conjugation of the sexes.

In this discussion, we have satisfactorily reached this point that the ovum and the spermatic particle are the potential representatives of the sexes to which they respectively belong. From their union results the condition of fecundation; the grand question now is, What is the *modus operandi* of this fecundating act? Bischoff's view, based upon speculative probabilities rather than upon observation, is, that contact alone of the spermatic particle with the ovum being sufficient for fecundation, impregnation consists in a kind of catalysis which has its exemplification in chemical conditions as enunciated by Liebig, (see loc. cit., p. 425.) But if catalysis embodies conditions in the organic like those of its relations in the inorganic world, it falls very far short of affording the requisite explanation of these phenomena, as we hope soon to show. This field of probabilities and possibilities we shall enter upon again.

Newport's contributions upon the physical phenomena of this subject are far the most complete that we have, and being the results of a most trustworthy observeer, they deserve our special attention.

Newport's experiments and observations show, in brief, that contact alone of the spermatic particles with the ovum is requisite for fecundation, that each ovum requires several particles; and that there must be *duration* of this contact. Here is a limit to observation of physical facts, and we regard these important data worthy of full trust, considering the source from which they come. This author discusses briefly the question of the impregnative power, and from the fact that the spermatic particles are sometimes seen to disappear on the surface of the egg-envelopes, he thinks it may be fair to conclude that the agency of this body is material in its operation; on the other hand, the fact of a mere *momentary contact* producing changes in the ovum, suggests in his mind the so-called catalytic power of certain known bodies. But he thinks that neither this last, nor endosmosis, are sufficient to account for the phenomena of this grand act.

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* We would refer to a profoundly physiological memoir by *Robin*, titled, "Ovum, its Existence as well in the Male as in the Female of Plants and Animals," &c. Compt. Rend., 1849.

The view of Keber has at least the merit of being unique if nothing more. As long ago as 1838, Martin Barry[*] announced that he had observed spermatic particles without the ovum. It should be mentioned, however, that long previous to this, Prevost and Dumas[†] in their researches found these particles within the envelopes of the eggs of frogs. But Keber's alleged discovery is, that the introduction of the spermatic particles within the ovum, takes place through a special opening, a kind of micropyle, or an infundibuliform passage. This discovery was made upon the eggs of muscles (*Unio* and *Anodonta*).

The announcement of the presence of such a structure on the ovum is indeed wonderful, and more especially so since other observers, whose attention has been particularly directed to the embryological study of these animals, have failed to notice it, although one would suppose that an apparatus of this kind must be very visible. Keber affirms that he has observed a like structure in the ova of some other animals which he has examined. But, however well fortified he has sought to make his observations, they certainly need more than the usual confirmation, and we cannot but regard it as far from being a settled fact in embryology, that the ovum has a direct structural communication externally for the ingress of spermatic particles to its interior.

After all this discussion of facts, we revert to the primary question, What is the nature of the fecundating act? We have seen that its physical phenomena consists in the contact of active vital spermatic particles with the mature ovum; that this mature ovum, thus effected, experiences peculiar changes which terminate finally in the evolution of a new being possessing the characteristics of the male as well as the female parent. It is true that, as was observed by Prevost and Dumas, and as has since been confirmed by Barry, Newport and others, the spermatic particles may force their way through the envelopes of the egg some distance into its interior, but we regard this as an unessential condition of the fecundatory act; adhering by their heads to the envelopes of the egg, the incessant action of the tails of these bodies would obviously tend to force them inwards, and especially through such homogeneous, soft tissues as the egg-envelopes.

By referring to the resultant phenomena of this fecundating process, we may perhaps gain some insight into the conditional if not the real nature of its agency. We have already said that the spermatic particle is the potential representative of the male; what signification is it to be attached to its mere physical form, that is, whether it is conical, globular, &c., we know not; and this seems the more hidden from our perceptions, from the fact that exactly similar forms and sizes,—in fact, physical relations apparently identical,—belong to spermatic particles of animals as widely dissimilar as could be. This fact alone, of the correctness of which we are well assured from our own observations, should be sufficient to convince us that we have here to deal with no very simple relations or properties. But let us pursue the subject a little farther. I scarcely need remark, that the offspring partakes equally of the physical peculiarities of both parents. It will at once be perceived, that in no way can a child receive those of the father except through the medium of the spermatic particles. And so, however strange it may appear at first, yet the conclusion is irresistible that spermatic particles must contain, concealed within them, in fact must be the vehicles of, not only the general peculiarities of the father as an animal, but mental dispositions also, and, as it is too often true of our own species, morbid taints superadded to all. It is wholly insufficient to say with Bischoff, that these anomalous conditions belong to the catalytic action; or with Newport, that they may be the exemplification of a force, peculiar and *sui generis.* For there is something above and beyond the wakening of latent forces, of one particle that is positive with another that is negative. The grand fact is, that the act of fecundation includes—whatever may be said of its also vitalizing the ovum—the communication or the transmission of the *individuality* of the male parent to the ovum; and the material organ of this transmission is, exclusively, the spermatic particle. We cannot see that these phenomena have an adequate explanation in any chemical relations of matter yet known, and what is more, we cannot conceive the possibility of this ever being the case, unless, indeed, chemistry gets beyond the domain of physics. Not but that chemistry involves points which are equally obscure, such as affinity, isomorphism, &c., but then the conditions of vitality, and especially the grand manifestation of it in question, certainly seem to us to include relations which have no correlation whatever with those pertaining to inorganic matter. To us the relations and conditions of cells, which are the primordial forms of organization, demand the *teleological* view of organic life.* *Individuality* is the distinguishing feature of organization, and we recognize in it something more than a mere collocation of physical conditions; we regard it as an idea which exists before organization, which last is only the language in which the idea is expressed. The conditions of this process of fecundation which we have just reviewed, will accept no other explanation, say what physiologists may about the *unphysical* character of such a view; we must have something beyond mere *combination,* which lies with physics; this we have in *development,* which lies with life.

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[*] *Barry*, Philos. Transact. 1840. pt. ii, p. 532—1843, pt. i, p. 33.

[†] *Prevost* and *Dumas*, Ann. d. Sc. Nat. ii, p. 233.

In conclusion, we may say, that as the domain of science lies with demonstrable phenomena, so its legitimate study is with the sensible and tangible. The conditions of immaterial agencies, and their relations with material forms, must be accepted as pure phenomena incapable of the analysis of ordinary scientific facts. But, after all, how much more of an enigma is the process of fecundation than the essence, the primordial cause of everything connected with both the inorganic and organic world about us. Science should put out her long, tentacular arms in all directions, laying hold of the tangible and the sensible, but it should be remembered that the supra-sensible is beyond her pale, and that "*multa esse constant in corpore quorum vim rationemque perspicere nemo, nisi Qui fecit, potest.*"

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* See the Relations of Cells to the Physical and Teleological Views of Organization, in Silliman's Journal, xv, 87, Jan., 1853.

PRACTICAL MEDICINE.

Yellow-Fever in Philadelphia. (*Quart. Sum. Trans.*)—Dr. Jewell presented to the College of Physicians, Philadelphia, at its meeting in August, the history of the fever which prevailed in that city in the month of July.

It appears that the barque Mandarin arrived at that port July 12, from Cienfuegos, Cuba, and, after undergoing the usual scrutiny at Quarantine, was allowed to proceed to her wharf on the following day. There was no cause of alarm until the cargo was removed, when a very offensive smell was noticed to proceed from the hold, which became intolerable whenever the bilge water was disturbed by the pumps. The first case of suspicious fever occurred July 19, in the person of a carman, whose stand was near the point where the cargo was discharged; and from this date to the 27th, seventeen cases occurred in this vicinity. Of these eleven died. In but eight was it known that black vomit existed, all of whom perished. Dr. J. concludes:—1. That no disease of a malignant type was prevailing in the city previous to the arrival of the Mandarin. 2. That none of the seamen discharged from the Mandarin have sickened. 3. That none of the laborers employed in unloading the Mandarin have taken the disease. 4. That the fever did not develop itself until after the cargo was discharged, when, it is believed, that the noxious emanations which had been latent in the hold, had an opportunity, acted upon by certain exciting causes, as heat and moisture, to disseminate itself, and coming in contact with other elements of decomposition existing on shore, and in the docks, soon poisoned the atmosphere of the immediate neighborhood, where the vessel lay moored. 5. That in no instance can the disease be traced to any individual, except among those who either visited or resided in the immediate vicinity of the wharfs where the vessel lay. 6. In no instance has the disease been communicated to any person visiting, or engaged in attendance upon the sick.

At the meeting of the Society in September, Dr. Jewell presented additional particulars, and new cases of fever:—The barque Mandarin was taken in charge by the Board of Health, July 26, scuttled, cleansed, and finally extensively repaired, and dispatched with a cargo for New-Orleans. Although workmen were constantly employed upon her after her removal from the wharf by the health officer, no one suffered an attack of fever. In addition to the morbific atmosphere which developed itself on board this vessel when her cargo was discharged, there existed in the immediate vicinity of the wharf causes which we must suppose had an agency in the development of the disease. Such were the outlet of a sewer, with its accumulation of putrid animal and vegetable matter, which was exposed to the rays of the sun at low water; a foul wharf; a filthy avenue, improperly drained; numerous damp and confined cellars, subject to an occasional overflow by the ebbing and flowing of the tide-water, and various minor causes fruitful in the production of atmospheric changes injurious to health.

Dr. J. has tabulated the cases which he has collected, 44 in all, with the following results: 9 cases were under the age of 20; 18 between 20 and 30; 10 between 30 and 40; and 7 over 40. Twenty-five were males and nineteen females. Twenty were natives of Ireland; four of Germany; five of England; and fifteen of the United States. Thirty-seven could be traced directly to the infected district; in four the origin was doubtful; and in three no clue could be obtained as to where the disease was contracted. Of the 44 cases, 34 died; the mean duration of the disease in those who died, was four days; in one case it was protracted to the fourteenth day. In 26 of the 44 cases recorded, the dark-colored "coffee-grounds" ejection from the stomach, or black-vomit, was observed. When placed under the microscope this substance exhibited the true blood-corpuscles in every case but one; this case recovered, and its genuineness is therefore doubted. In 11 cases, post-mortem examinations were made, and, in all, the yellow or ochre-colored liver was detected in whole or part; the "coffee grounds" fluid, or malæmic blood was also found either in the stomach or intestines of all these cases. The mortality was 80 per cent., or 5 to 1 of recoveries.

The treatment generally pursued in the first stage was blood-letting from the arms, and by cups to the back and abdomen, emetics, mercurial purges, diaphoretics, &c. In the second stage, or as soon as a remission took place, which was generally about the third or fourth day from the attack, calomel, as a sialogogue was administered in some cases, in others quinia, in three or five-grain doses, every one or two hours. If reaction was not prompt, brandy or wine internally, and local stimulating applications by blisters and rubefacients, were resorted to. Quinia in full doses, on the first intimation of a remission from fever, appears to have been a favorite remedy. In some cases, over seventy grains were administered daily for several days, and, as far as we could learn, without any annoyance to the brain or other organ, but with advantage. In Blockley Hospital, cases were treated without quinia in any stage of the disease; calomel pushed to salivation was the principal remedy employed.

In the discussion which followed this communication, the fact of a fatty degeneration of the liver having been detected in those who had died of yellow-fever, was referred to by Dr. La Roche, and confirmed by Drs. Bache and Keating in the autopsies made at the Pennsylvania and St. Joseph's Hospitals. In all the cases, the cells of the liver were found to be filled with an oily substance.

SURGERY.

Aneurismal Tumors upon the Ear, successfully treated by the Ligation of both Carotids.—Dr. Mussey reports a case (*Am. Jour. Med. Sci.*) of ligature of both carotids for aneurismal tumors occurring upon the ear. The patient was aged 19, and had from childhood a cutaneous nævus in front of the left ear; about eight years since small elevations of the integument were observed at the points where the tumors arose, having a perceptible pulsation after exercise. They gradually increased in size, and at the time of the operation one occupied the cavity of the concha, rising above the level of the antitragus, and another covering the tragus, and, extending some way anterior to it, was as large as a middling-sized nutmeg. There was also a globular tumor of the same character beneath the ear and between the mastoid process and ramus of the jaw, having the size of an Isabella grape. The most promising course of treatment was thought to be the ligation of one or both carotids. The success of Mr. Travers' case in 1809, in which the primitive carotid was tied for "aneurism by anastamosis of the orbit;" of Mr. Dalrymple's case in 1813; and Dr. J. M. Warren's case in 1846, where both carotids were tied for a vascular tumor of the mouth, face, and neck, gave a reasonable hope of success in this case. Accordingly, on the 18th of November, the left carotid was tied, and the pulsation in the tumor ceased immediately. No unfavorable symtom occurred, and on the 12th day he was allowed to sit up, when indistinctness of vision in the left eye was complained of; this gradually passed off. Though the tumors diminished in size, the entire success of the operation was doubtful, and in four weeks the operator tied the right carotid. In both instances the ligature was applied just below the crossing of the omohyoid muscle. One ligature came away in sixteen days, the other in twenty. The tumors now subsided more rapidly, aud subsequently their reduction was hastened by the application of collodion. In seven weeks scarcely a vestige of the tumors remained, and in three months the cure was complete.

Amputation at the large Articulations. By Wm. H. Van Buren, M. D., Surgeon to the N. Y. Hospital.

Compound Comminuted Fracture of the Femur, near the Great Trochanter, with extensive Laceration of the soft Parts; Amputation at the Hip-Joint; Death. Eliza Reid, æt. 9, was admitted into the Hospital on the 5th of July, two hours after being run over by a railroad car, which produced a compound comminuted fracture of the femur, and extensive laceration of the anterior portion of the thigh; the wound extending from two inches below Poupart's ligament to the knee-joint. No pulsation could be felt in the anterior tibial artery. There was considerable vomiting before admission. Reaction having taken place, a consultation was called, and amputation at the hip-joint advised; Drs. Cheesman, Buck, and Markoe being present. At 10 o'clock, the patient being placed under the influence of ether, the operation was performed, by antero-posterior flaps, and the wound brought together as rapidly as the safety of the patient would admit. Very little blood was lost during the operation. The patient vomited during the administration of the ether, rejecting some half-digested food, which had been taken before the accident. The shock of the operation was excessive, but in two hours the patient had completely rallied, under the careful use of stimulants, and, all circumstances being considered, passed a favorable night. The condition of the patient appeared promising until the morning of the 7th, when the pulse began to grow more feeble and frequent, and slight delirium was noticed. From this time she sank gradually, and died at 2 o'clock, P. M., forty-six hours after the injury, and forty-two after the operation.

The fatal issue in this case was attributable mainly to the excessive depression of the powers of life, which always follows railroad injuries. The child rallied from the fearful injury she had received, and also rallied well after the operation; but sank in the effort at reparation. A *post-mortem* examination showed union already partially effected in the stump, and no internal injuries were detected. The mode of operating adopted in this case, was that which had already been performed by the attending surgeon, in a case followed by recovery; the posterior flap being made by an incision carried from without inwards.

Compound Comminuted Fracture of Humerus, near Shoulder-Joint, with Wound of Brachial Artery; Amputation at Shoulder-Joint; Recovery. Christopher Fricke, æt. 35, a healthy German, of temperate habits, was admitted on the 1st of July, with a comminuted fracture of the humerus, at its surgical neck, accompanied by severe bruising of the surrounding parts, and occasioned, a few hours previous to his admission, by the fall of a building, at which he was employed at work. One of the fragments of the humerus had been forced through the integuments on the inside of the arm, near the axilla, lacerating the soft parts extensively, and wounding the brachial artery. The limb was much infiltrated with blood; its temperature was much lower than that of the opposite side, and no arterial pulsation could be detected below the seat of the injury. No hemorrhage. On the following day, reaction having taken place, a consultation was called upon the case. It was determined to endeavor to secure the wounded artery, to explore the extent of the injury, and, if possible, to endeavor to save the limb. A ligature was accordingly placed beneath the axillary artery, after the administration of ether; and the incision thus made was prolonged downwards, over the brachial artery, into the original wound. Several arterial points were secured, but the comminuted state of the bone, and the extensive detachment of the soft parts around its head, together with the extensive infiltration of blood amongst the injured parts, rendered the removal of the limb evidently advisable, and this was accordingly effected by means of antero-posterior flaps. Serious collapse followed, from which the patient rallied in a few hours under stimulants, and subsequently recovered, without a serious symptom. He was able to leave his bed within three weeks from the operation, and was discharged, cured, on the 11th of August.—*N. Y. Med. Times.*

Excision of the Tonsils.—In a report on the Surgery of Cortland County, to the Medical Association of Southern Central New-York (*Trans. of Assoc.*), Dr. C. Green makes the following interesting remarks upon the practice of removing the tonsils:—

I have operated on about twenty different patients, and in thirteen of the cases I have amputated both tonsils. The ages of the patients have varied from three and a half to thirty-six years. The circumstances indicating the necessity for these operations have been various, but the principal one has been the tendency to repeated attacks of tonsilitis, and of pharyngitis. In several instances there have been superadded to these indications for removal the existence of deafness, and an embarrassment of articulation. Another circumstance has, in a few instances, induced me to remove the tonsils, viz: laborious respiration during sleep, producing exhaustion, disturbed sleep, and even incubus. These symptoms are often observed in young children, and are very distressing, and sometimes seriously encroach upon the general health. There are cases where the tonsil is not much enlarged, but where the large mucous follicles (of which it is a congeries) become obstructed by calcareous concretions, which keep up a sub-inflammatory state of the tonsil, the fauces and the adjacent parts. In these instances, the removal of a portion of the tonsil will prevent the calcareous accumulation, and allow the surrounding membrane to resume its normal condition. The amputation of the tonsil is also indicated where, in the case of children, the tonsil is very large, and where suffocation is threatened at every renewal of inflammation from the impression of cold, and where there is danger of the induction of croup by extension of the inflammation.

The question arises, is there no therapeutical agent which can supplant the knife in the treatment of enlarged tonsils? I answer, in brief, that after repeated trials of nitrate of silver, iodine, and other medical treatment, and after marking the experience of other surgeons for the relief of this affection by medicines, and comparing the results with the effects of the knife, I can say most emphatically, that for safety, promptness, and efficiency, the knife is superior to all other means employed.

Another question frequently put to the surgeon by patients, and sometimes by physicians too, is, "Do the tonsils grow again, after amputation?" Prof. Hamilton, in an able article on enlarged tonsils, in the third volume of the Buffalo Medical Journal, says (page 195) that, according to his experience, when the whole or two-thirds of the gland is cut away, no more trouble is experienced from it; but that when one-half, or one-third is removed, the balance does not generally disappear, and not unfrequently it again enlarges. This is not in accordance with the experience of many surgeons, nor with my own. Dr. Hyde has seen it but once. My opinion is, that in nearly all the cases of supposed regrowth, it is an appearance and not a reality. Dr. J. Mason Warren, of Boston, in an able article on "Enlargement of the Tonsils, attended with certain Deformities of the Chest," published in 1839, (Am. Jour. Med. Sci., Aug., 1839, p. 525,) mentions one case in a list of nineteen, where, at the end of a short period after amputation, an appearance was presented as if they had been re-generated. This, he remarks, arose from the original shape of the tonsil, in which the base was very broad, and extended some distance down the throat. The appearance of reproduction arose from the upper and lower portions rising or curling up, as it were, after the apex was removed.

This leads me to speak of lobed tonsils. I have had two cases in which the tonsils were each divided for about two-thirds of their lateral depth into two lobes. In the first of these cases, both lobes stood out prominently from the arches of the palate, so that I removed them by operating twice on each tonsil—each lobe being about the ordinary size of a hypertrophied tonsil, the remaining portion atrophied; and an entire relief of the symptoms, for which removal was demanded, was the result. In the other case, I was not aware of the existence of the posterior lobes, until some days after the amputation of the anterior ones. At the end of that time, the patient, a young lady, presented herself again, saying that her tonsils had grown again; and, to my astonishment, I found, on looking into her throat, two plump-looking tonsils as ever need be, standing out about three-quarters of an inch from the edges of the palate. It was twilight, and I did not like to yield my opinion, previously expressed in reference to the reproduction of amputated tonsils, until I could have more light upon the subject. The next day, by a strong light, I examined the throat, and found at the base of the "new" tonsil the cicatrix left by the amputation of the anterior lobe. The difficulty was at once explained. The anterior lobes had pushed the posterior ones backwards and downwards along the side of the pharynx, so that their existence was not suspected before operation, and at the time of it they were obscured by the coagula, which immediately formed about the divided surface of the first lobes. When the pressure of the anterior lobes was removed, the posterior ones resumed the usual position, and we had a marked instance of what is supposed to be a regrowth of the tonsil. I am willing, however, to subscribe, in part, to Dr. Hamilton's views on this subject, for I believe that if only a *small* portion of the gland is removed, the same condition of the organ remains—the morbid vascularity is kept up, and the tonsil *continues* to enlarge. The conditions which contra-indicate amputation, where for other reasons it is desirable, are inflammation of the substance of the tonsil, and the hemorrhagic diathesis.

As to results of the operation, I must say that they have, in my experience, been almost uniformly gratifying. I cannot recall to mind one instance where I think injury was done to the throat by the operation, and but two instances in which no benefit was derived. I have witnessed profuse bleeding in but one instance. This was in the person of a young man with whose constitutional peculiarities I supposed myself acquainted, and so did not make the inquiry, which I rarely omit, whether he was apt to bleed much for slight wounds. In this case I found the patient to be of a decidedly hemorrhagic tendency, and in ten or fifteen minutes after the operation, I found him in the state of partial syncope; and it was not until a minute afterwards that I was aware of the extent of the hemorrhage; for immediately after the operation he reclined upon a settee, and in that position, instead of disgorging the effused blood, he swallowed it, and when faintness came on, he vomited a large quantity of coagulæ. I immediately applied the neckcloth, filled with pounded ice, and the bleeding was promptly arrested. This, by the way, is the most efficient remedy for this accident which we possess.

My strong conviction is, that this operation ought to be resorted to much oftener than it is by a majority of practitioners. There is no doubt that some operators have made this a surgical hobby, and see an indication for cutting in every throat, but the mass of practitioners, so far as my observation and acquaintance extend, are willing to let the matter go, if they can be excused from operating, or, perhaps, in many instances, they do not appreciate the indications for the removal of enlarged tonsils.

Felt Splints. By F. H. HAMILTON, M. D.—Some years ago, I think in 1845, Felt Splints were brought to me by an agent of the manufacturer. The felt was sold in sheets, and also in pieces, modelled so as to be readily adapted to the form of the limbs. In some respects it was superior to gutta percha, and I am inclined to think that on the whole it was the best splint ever used. I cannot learn that these splints are now manufactured in any part of the United States, and I will therefore inclose you the recipe for making them, which was kindly given me by the agent, and which I have frequently used myself:—Dissolve three pounds of gum shellac in two quarts of alcohol. It should be dissolved in a tin vessel, furnished with a tight cover to prevent evaporation. Spread a piece of old or new woolen cloth on a board, and with a clean brush saturate both sides of the cloth with the solution. Hang it up until it is thoroughly dried. Lay it again upon the board and apply a second coat of the solution to one side only of the cloth. Dry again, and apply a third coat to the same side. There will now be three successive layers upon one side and one on the opposite. While the last coat is yet fresh, fold the cloth so that the side having three coats shall be applied to itself. Now, with a hot flat-iron, smooth and press the surfaces together. When it is cold, a slight rubbing with sand-paper makes it fit for use. It becomes a firm, almost unyielding board, but exposure to a moderate heat will make it pliant, so that it can easily and accurately be adapted to any surface. —*Buff. Med. Jour.*

EDITORIAL AND MISCELLANEA.

Institutions for the Treatment of Special Diseases.—There is a necessity existing in all large towns for the establishment of institutions for the treatment of certain diseases. The idea is in part realized by the creation of institutions for the insane, the deaf and dumb, the blind, etc. But in European cities this principle is carried out much farther in the erection of hospitals for the treatment of certain forms of disease which, from their nature, require isolation from other diseases, or methods of treatment difficult of application in general hospitals, Thus we have hospitals for the venereal disease, for skin diseases, for consumptives, for sick children, orthopædic institutions, &c. &c. In each of these the greatest facilities are afforded for the treatment of the several forms of disease peculiar to each, either in surgical appliances or remedial measures.

There is existing in New-York an equal, and owing to its immense immigrant population, perhaps a greater necessity for the creation of institutions for the treatment of special diseases than in foreign cities. No charitable enterprise could be initiated more laudable in its inception, and more humane in its results, than the erection of a hospital for the consumptives. This large class of patients, which crowd the wards of all our hospitals, and hourly apply for relief at every public charity, demand special provision for their remedial and hygienic treatment, which no general hospital can afford. That phthisis is in any considerable degree amenable to treatment we do not assert, but that the pauper consumptive may be greatly benefited, his life prolonged, and the ills of a protracted and insidious disease greatly mitigated by being placed under circumstances best adapted to his physical and mental condition, there can be no doubt. There is also the same need of a hospital for drunkards. It is a well established fact that a large class of confirmed inebriates are laboring under a species of insanity as destructive to the mental and physical health of its victim, and as dangerous to society at large, as that which afflicts nine-tenths of the inmates of any lunatic asylum. To restore them to health requires total abstinence from all that can intoxicate, and a lengthened term of moral training, surrounded by influences all tending to invigorate the moral and physical nature of the individual. We need not specify other instances in which the philanthropy of our profession should employ itself in ameliorating the condition of the sick. It is not our province to appeal to the public to erect hospitals, and create charitable institutions; this belongs to private effort and individual appeal; but we may not inappropriately urge this subject upon the attention of the profession, well satisfied that the public will second with material aid any effort which they may put forth to establish new charitable institutions in our city. When the initiatory steps have been taken in such an enterprise with the proper motive, there has never yet been wanting a public emulation in its successful prosecution.

We may notice in this connection the recent establishment of two private institutions based on the considerations above given; the first an orthopædic institution, in the neighboring city of Brooklyn, by Drs. Louis, Bauer and Barthelmess; and the other, an institution for the treatment of the accidents of parturition, in this city, by Dr. Sims, late of Alabama. Of the qualifications of the former gentlemen to treat the deformities incident to articular diseases with an enlightened conception of the pathology of these affections, and the principles of treatment, our readers have had ample means of judging by the recent highly interesting papers which they have contributed to this Journal. Their institution is prepared for the reception of patients, and well supplied with attendants and all the appliances necessary for the successful treatment of the subjects of articular disease and deformities. Compelled by delicate health to seek a residence in a northern climate, Dr. Sims has located in New-York, and opened a private institution in one of the pleasantest portions of the city, for the purposes already indicated. There is not a more pitiable class of patients in community than the subjects of vesico-vaginal fistula—an accident which Dr. S. has treated with much success.

An Act relating to Appointment of Members of the State Medical Society.—We desire to call the attention of county medical societies and our readers to the following "Act" of the Legislature, passed June 4th, 1853. By this it will be seen that the ratio of representation from county medical societies is materially increased; an increase which it is hoped will augment the scientific resources, and further the best interests of the parent society. The passage of this law, we believe, is mainly due to the efforts of Dr. Thomas W. Blatchford, of Troy.

Laws of the State of New-York, 1853. *Chapter* 317, *page* 660. *An Act to amend an Act, entitled "An Act to incorporate Medical Societies, for the Purpose of regulating the Practice of Physic and Surgery in this State,"* passed April 10th, 1813.

Passed June 4th, 1853.

The people of the State of New-York, represented in Senate and Assembly, do enact as follows:

§ 1. Section third of said act is hereby amended as follows: Instead of the words "said society shall be composed of one member from each of the county societies in the State," it shall read, "said society shall be composed of as many members from each county medical society as there are members of the assembly from such county."

§ 2. This act shall take effect immediately.

To the Medical Profession in New England and New-York.—We have received the following circular from Prof. Hooker, with a request that we would call the attention of the profession to the matter. We hope that the desires of the chairman of the committee will be liberally responded to, and that every member of the profession will feel that he is individually responsible for the production of a portion of the materials for the report.—*Eds. N. Y. Jour.*

The undersigned, chairman of the committee on epidemics in New-England and New-York, in order to make a report at the coming session of the American Medical Association, must have material for this purpose from medical men in different portions of the field indicated. No report has been made from this section since the appointment of the committee at the session in Charleston in 1851, *simply from want of such material.* The chairman would therefore call upon such of the profession in New England and New-York, as have in their possession interesting facts or results of general observations, to furnish them to him, that they may be embodied in his report. It would be well to have the observations cover all the period since the appointment of the committee, viz., May, 1851. It is not deemed necessary to specify the points on which observers can report, as these will readily suggest themselves. It is desired that all communications be forwarded by the 1st of March. WORTHINGTON HOOKER.

New Haven, Dec. 20, 1853.

Harvey demonstrating the Circulation of the Blood.—We have received from the publisher, Mr. G. S. Appleton, an engraving of Mr. R. Hannah's celebrated painting, representing Harvey demonstrating to Charles 1st his theory of the circulation of the blood. As a strictly professional piece, laying aside all other considerations, it is deserving of the approbation of the profession. In the execution of it the artist has taken great pains to preserve the likeness of Harvey, and was guided by his excellent portrait, by Cornelius Jansen, in the College of Physicians, London. This engraving deserves a place in the office of every physician.

Adhesive Plaster.—Mr. John M. Davidson, of this city, has forwarded us a specimen of adhesive plaster, which upon trial we have found to possess many advantages over that in ordinary use, and which we commend to the notice of the profession.

OBITUARY.

DEATH OF THOMAS G. MOWER, M. D.—Dr. Mower died at his residence in this city on the 7th of December last. He was one of the senior surgeons of the U. S. army. Dr. Mower served with distinction in the Frontier War of 1812. He was a gentleman of varied scientific attainments and a profound scholar in the science of medicine. His communications to the literature of the profession were few, but able and scientific. In the second volume of the *N. Y. Journal of Medicine* will be found a paper from his pen, on the History of the Institution of Meteorological Observations by the Army Department, and the existing state of Meteorology in this Country, which is highly creditable to the scientific zeal and literary taste of its author. In the inception of this Journal he was one of its warmest supporters.

DEATH OF R. L. SCRUGGS, M. D.—We regret to notice in *The Southern Journal of the Medical and Physical Sciences* for November, an announcement of the death of Dr. Scruggs, one of its corresponding editors. He died at his residence in Shreveport, La., on the 27th of Sept., of yellow-fever, which prevailed as an epidemic in that vicinity. Dr. S. was a native of Tennessee, but had been a resident of Louisiana for the last fourteen years of his life. He was an eminent physician, a vigorous practical writer, and his loss is mourned by his editorial associates.

DEATH OF FRANCIS BULLOCK, M. D.—Dr. Francis Bullock, Resident Physician of the Lunatic Asylum, of Kings Co., at Flatbush, L. I., died Aug. 1, 1853, of typhoid fever, in the 26th year of his age. Dr. Bullock had filled the appointment, which he held at the time of his death, for the past three years and a half, with great fidelity and acceptance, and evinced a skill and maturity of judgment indeed singular in one so young.

TO READERS AND CORRESPONDENTS.

ERRATA OF THIS NUMBER.

The reader is requested to correct the following errors, which have inadvertently crept into this number of the Journal.

Page 162, line 6, for "fʒ iv," read "℥iij."
" 164, " 24, " "fʒiij," " "f℥iij."
" 165, " 18. insert "for" after "prescribed."
" 166, transpose lines 7 and 8.
" 168, line 6 from bottom, for "stag" read "stage."
" 231, for "Pareira" read "Pereira."
" 256, " 8 " " delo "not."

The following publications have been received:—

A Treatise on the Diseases of the Eye. By W. Lawrence. F. R. S., Surgeon to St. Bartholomew's Hospital, etc., etc. A New Edition. Edited, with numerous additions, and two hundred and forty-three illustrations, by Isaac Hays, M. D., Surgeon to Wills' Hospital, etc. etc. Philadelphia: Blanchard & Lea, 1854, 8vo, pp. 948. (From the Publishers.)

A Practical Treatise on Inflammation of the Uterus, its Cervix and Appendages, and on its Connection with Uterine Disease. By James Henry Bennet, M. D., Member of the Royal College of Physicians, etc., etc. Fourth American, from the Third and revised London Edition. Philadelphia: Blanchard & Lea, 1853, 8vo, pp. 430. (From the Publishers.)

Homœopathy: its Tenets and Tendencies, Theoretical, Theological, and Practical. By James S. Simpson, M. D., F. R. S. E., Professor of Midwifery, University of Edinburgh, etc., etc. First American, from the Third Edinburgh Edition. Philadelphia: Lindlay & Blakiston, 1854, 8vo, pp. 304. (From the Publishers.)

Clinical Report on Dysentery, based on an Analysis of Forty-nine Cases With Remarks on the Causation, Pathology, and Management of the Disease. By Austin Flint, M. D., Professor of the Theory and Practice of Medicine in the University of Louisville, Ky. Buffalo: Jewett, Thomas & Co., 1853, pp. 90. (From the Author.)

Clinical Report on Chronic Pleurisy, based on Analysis of Forty-seven Cases. By Austin Flint, M. D., Professor of the Principles and Practice of Medicine in the University of Buffalo, N. Y., and in the University of Louisville, Ky. Buffalo: Jewett, Thomas & Co., 1853, pp. 58. (From the Author.)

On the Etiology, Pathology, and Treatment of Fibro-Bronchitis, and Rheumatic Pneumonia. By Thomas H. Buckler, M. D., formerly Physician to the Baltimore Almshouse Infirmary. Philadelphia: Blanchard & Lea, 1853. (From the Publishers.)

Human Anatomy, Physiology and Hygiene. By T. S. Lambert, M.D., Lecturer on Physiology at the Pittsfield Institute (for young ladies), etc., etc. Illustrated with nearly three hundred Wood-cut and Lithographic Engravings. Hartford: Brockett, Hutchinson & Co. New-York: Ivison & Phinney, 1854. 8vo, pp. 456. (From the Author.)

Prize Essay, on the Use and Abuse of Alcoholic Liquors, in Health and Disease. By William B. Carpenter, M.D., F.R.S. Author of "The Principles of Physiology," etc., etc. With a preface, by D. F. Condie, M.D. Philadelphia: Blanchard & Lea, 1853. 12mo, pp. 178. (From the Publishers.)

A Treatise on Venereal Diseases. By A. Vidal (de Cassis), Surgeon of the Venereal Hospital of Paris, etc., etc. With colored plates. Translated and Edited by George C. Blackman, M.D. Fellow of the Royal Medical and Chirurgical Society of London, etc., etc., etc. New-York: Samuel S. & Wm. Wood, 1854. 8vo, pp. 499. (From the Publishers.)

Materia Medica, or Pharmacology and Therapeutics. By William Tully, M.D. Vol i. No. 9. Springfield, Mass.: Jefferson Church, M.D., 1853. ☞ This number fully sustains the character of the work. We shall wait with no little desire for the completion of the work. From some cause the 6th and 8th numbers have not been received.

The Therapeutical Powers and Properties of Veratrum Viride. By Wesley C. Norwood, M D., of S. C. New-York: 1854. 8vo, pp. 40. ☞ This pamphlet is intended as a circular, setting forth the author's views of the use of Veratrum Viride in Medicine, and also commendatory notices of physicians who have used his tincture in practice.

Homœopathy: An Introductory Address to the Students of Sterling Medical College. Nov. 2d. 1853. By Charles A. Lea, M.D., Prof. &c., Columbus, O., 1853. 8vo, pp. 40. ☞ Like all the productions of Dr. Lee's pen, this is a finished performance. It is a master-piece of argument, based upon facts which have, and will to all time, prove the baselessness of this heresy.

A Lecture Introductory to the Course of Lectures in the Medical Institution of Yale College. Sept. 9th, 1853. By Jonathan Knight, M.D., Prof. of Surgery. New-Haven, 1853. 8vo. pp. 19. ☞ This is an exceedingly interesting lecture, containing as it does a succinct account of the rise and subsequent history of the Medical Department of Yale College,—the fourth medical school, in order of age, established in the United States.

Doctors Commons, an Ethic Address delivered before the District Medical Society, for the County of Burlington, N. J., Jan. 10th. 1854. By S. W. Butler, M.D., President of the Society, Burlington, 1854. 8vo, pp. 12.

☞ Communications intended for publication, and Books for Review, should be sent, *free of expense*, directed to Drs. Purple and Smith, Editors of the New-York Journal of Medicine, 183 Hudson-street, *New-York*. Persons at a distance may direct parcels, or exchanges, *paid* as above, under cover, to M. J. B. Bailliere, Rue Hautefeuille, *Paris*; or H. Bailliere, 219 Regent-street, *London*; or Lindsay & Blackiston, *Philadelphia*; or Wm. B. Ticknor & Co., *Boston*. The attention of Correspondents is respectfully requested to the above, as the Publishers are frequently subjected to unnecessary expense for postage and carriage.

All remittances of money and letters on the *business* of the Journal, should be directed to the Proprietors.

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THE NEW-YORK
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PART FIRST.

ORIGINAL COMMUNICATIONS.

Art. I.—*On the Use of Common Salt in the Treatment of Intermittent Fever.* By Joseph C. Hutchison, M. D., of Brooklyn, N. Y.

The extensive demand for sulphate of quinia, and its consequent high price, and, indeed, the frequent impossibility of obtaining it, in the portion of Missouri where I have recently practised, induced me to subject to the test of experiment various remedies which have from time to time been proposed, as substitutes for that invaluable medicinal agent, in the treatment of intermittent fever.

Among others, a succedaneum, quite recently presented to the notice of the profession, by Drs. Scelle Montdezert and Piorry (viz., common salt), has claimed our attention, and forms the subject of the present paper. For a history of its use by these gentlemen, their mode of administration, &c., the reader is referred to a paper, by W. P. Lattimone, M. D., in the *American Journal of Medical Sciences* for July, 1852. Professor Herrick, of Rush Med. College, has also reported two cases, in the *N. W. Med. and Surgical Journal*, for Sept., 1851, which go to corroborate the success obtained by MM. Montdezert and Piorry.

Although the credit of introducing chloride of sodium, as a remedy for intermittent fever, to the notice of the profession generally, is undoubtedly due to the French physicians above mentioned, it appears that it was used for this purpose prior to that time. Soon after I had commenced experimenting with it, I mentioned the subject to a neighboring physician (a gentleman of undoubted veracity and professional skill), who informed me, that some years previously he had heard of its being used as a domestic remedy for fever and ague by the people in that neighborhood. I also learned, from a highly respectable lady, that her husband's grandfather, many years before, was in the habit of curing fever and ague among his negroes, by giving copious draughts of salt water from a large salt spring on his farm.

Notwithstanding the favorable reports which have been made, the remedy has been but little used in this country, because its antiperiodic influence was doubted. And it has been thought not inappropriate again to introduce the subject to the notice of the profession, with the hope that it may receive more general attention. The experiments were commenced for the purpose of determining, with some degree of accuracy, a knowledge of its value in intermittent fever, by exhibiting it in a large number of cases. And no better field could have been selected for the experiment, not even the far-famed Pontine marshes, whether we consider the very general prevalence of the disease, or the protean and obstinate forms it here sometimes assumes. In consequence however of my removal to this city, it was prescribed in but twenty-two cases, occurring in twenty individuals, a summary of which is now presented as they were recorded; there has, consequently, been no attempt at a selection of the cases. I was enabled to ascertain the permanency of the cures in but three patients, and the condition of the spleen in but one. It would have been very desirable to have observed its effect on the spleen, which, according to Piorry, is diminished in volume with marvellous celerity. These unavoidable imperfections in the history of the cases arise from the fact, that most of the patients resided at a considerable distance from my office, and were prescribed for without having been examined; and, indeed, from the very general prevalence of the disease, most persons have become so familiar with the use of quinia (which is usually kept in the house, and prescribed as a matter of economy and convenience by the head of the family, when necessary), that a resort to the physician in ordinary cases is rarely thought of. But I think we may safely surmise, that hypertrophy of the spleen existed in every case, excepting, perhaps, in cases 13 and 16, which were recent cases, occurring in very young subjects; because, in malarious districts, this pathological condition exists almost universally, and can be readily detected by careful percussion, even in persons who have never had what are commonly termed miasmatic diseases (intermittent and remittent bilious fevers), and who enjoy apparent good health. It appears to be the direct effect of the malarial poison, and it is a fact well known to practitioners in miasmatic districts, that in all diseases occurring there, even in those not strictly of malarial origin, the morbid effects of this poison are more or less obvious, requiring for their treatment specific remedies, in addition to their ordinary therapeia.

Case 1.—Elisha E., æt. 3 years, prescribed for April 28th, 1852. He had intermittent fever last spring, which was then checked, but returned the ensuing autumn, and has recurred at irregular intervals to the present time. Quinia, arsenic, &c., have been used. The present attack is of the tertian type. Skin pallid and sallow, and his general health is somewhat impaired. ℞. Chloridi sodii ʒij; mucil. ulmi f℥j. M. A teaspoonful to be taken every three hours, commencing twenty-four hours before the next paroxysm is expected.

I was informed by his father to-day (May 3d), that the paroxysms were at once arrested by the above mixture. There was no disturbance of the stomach or bowels. Thirst.

Case 2.—S. M., farmer, æt. 30, prescribed for May 3d, 1852. He contracted intermittent fever last autumn, and relapses have occurred, at intervals of a few weeks, to the present time, notwithstanding the abundant use of quinia, and other tonics and anti-periodics. The present attack has existed for several days, and presents the quotidian form. His complexion exhibits the appearance characteristic of the disease. ℞. Chl. sodii ℥j; mucil. ulmi. fʒ iv. M. Tablespoonful every two hours during the next intermission, as there is not now sufficient time to take the requisite quantity before the paroxysm is expected. On the 5th the chill returned at the usual time (although the salt was taken as directed), but in a much milder form; thirst; four dejections without pain, and no nausea.

This patient was accustomed to having his chills arrested immediately by sulphate of quinia, and was unwilling to risk again the prophylactic virtues of the chloride. But, from the marked diminution of the violence of the paroxysms, there is great probability that, if it had been continued, it would have arrested the disease. The disorder was suspended by liq. potass. arsenit. gtt. xv, ter in die.

CASE 3.—Elizabeth M., æt. 13, quotidian intermittent; prescribed for May 5th. The present attack has existed several days. She had the disease last autumn, and occasional relapses have occurred to the present time, sometimes assuming the quotidian form, and at others the tertian. Has been accustomed to use quinia to arrest the paroxysms. General health pretty good during the intervals of the attacks. She was ordered chl. sodii ʒij in mucilage every three hours until six drachms were taken, commencing eight hours before the return of the paroxysm was expected. The disease was thus immediately arrested. She vomited once after taking the second dose, which was soon repeated and well retained. Four dejections, without griping; no nausea; thirst.

She was directed to take a drachm of the chloride night and morning for three or four weeks, as a prophylactic. The disease subsequently returned, but I could not learn with accuracy how long it was kept in abeyance. Her father informed me, however, that it did not return so soon as it had formerly done, after the use of quinia.

Case 4.—T. G. M., farmer, æt. 30, prescribed for 5th of May, for the tertian form of intermittent fever. He had the disease last September; it was then checked, and he has been free from it until three weeks since, when it returned, and was promptly arrested by sulph. quinia. Since then he has been using, as a prophylactic, bitters composed of bark, gentian and rhubarb, but a relapse occurred, notwithstanding, on the 21st day. His skin is pallid, but he feels pretty well during the intermission. He was ordered chloride of sodium ʒij in mucilage, every four hours, commencing fifteen hours before the paroxysm is expected to return, and to take four doses. Only six drachms (three doses) were taken, the paroxysm having occurred one hour after the last dose, and six hours earlier than it was expected. There was thirst, but no disturbance of the stomach or bowels. This patient objected strongly to the taste of the remedy; and, as he doubted its efficacy, and was very anxious to have the disorder *immediately* arrested, I prescribed sulph. quinia grs. x, aromatic powder grs. x, opium gr. j; to be taken five hours before the next paroxysm was expected. This promptly checked the disease.

The above case was very unsatisfactory in determining the value of the remedy. It cannot be counted a failure, nor, indeed, have we any positive evidence it would have produced the effect desired, if the quantity prescribed had been exhibited. I may remark, *en passant*, that I usually prescribe ten grains of quinia at a single dose, in intermittent fever, five hours before the accession of the paroxysm, combined with an equal quantity of aromatic powder, when there is a want of gastric sensibility, and sometimes with an opiate, or a purgative dose of calomel, when indicated. Given in this dose, a concentrated effect is developed at the proper time, which makes it more potent in arresting the disease, than if distributed over a long interval: a second dose is rarely necessary. It is preferable, also, as a matter of convenience to the patient.

Case 5.—Leonard W., æt. 6 years, prescribed for May 8th, 1852. He contracted intermittent fever last November, and relapses have repeatedly occurred during the winter and the present spring. He has now had two paroxysms, occurring on alternate days. Skin pallid and sallow, but he complains of no particular disorder during the intermission. ℞. Chloridi sodii, ʒijss. To be taken in mucilage, before the next paroxysm is expected. The chill returned on the 10th, at the usual time, and the following mixture was then ordered: ℞. Chloridi sodii ʒiv; mucil. ulmi f℥ij.; tablespoonful every four hours, commencing fifteen hours before the next paroxysm is expected. This increased quantity of the salt promptly arrested the disease. No nausea or purging; thirst. From the readiness with which the second paroxysm was arrested by four drachms of the salt, it seems not improbable that the first might have been prevented, if as large a quantity had been given. Of this, however, we can only surmise.

Case 6.—A negro woman belonging to Mrs. S., æt. 20. She has been subject to the tertian type of intermittent fever for several months, it having been from time to time suspended by quinia. The present attack (May, 1852) has existed four or five days. Her general health is somewhat impaired. ℞. Chl. sodii ʒix; mucil. ulmi f℥iij, M. A tablespoonful every three hours, commencing eighteen hours before the next paroxysm is expected. The above dose promptly arrested the disease, nor had there been a relapse up to May, 1853 (one year from the time the salt was prescribed), as I learned from Mrs. S. There was thirst, but no disturbance of the stomach or bowels followed the use of the remedy.

The promptness and permanency of the cure in this case is very remarkable, when we consider the length of time the patient had been subject to the disorder, and the frequent relapses which occurred when it had been suspended by the use of quinia. So well pleased was Mrs. S. with the effect of the remedy in this case, that she subsequently wrote me from Virginia, where she had gone to visit her daughter, requesting the recipe for the "invaluable prescription," for the benefit of her friends there.

Case 7.—Ellen B., æt. 4 years, prescribed for August 1st., 1852. She had intermittent fever for the first time last summer, and since then the paroxysms have recurred at irregular intervals to the present time. They have been suspended sometimes by quinia, and at others by liq. potass. arsenit. The present attack has existed for several consecutive days. Skin pallid and icterode, and her general health is considerably impaired. ℞. Chloride sodii ʒiv; mucil. ulmi f℥ij. M. A tablespoonful every three hours, commencing twelve hours before the next paroxysm is expected. The disease was thus at once arrested. Thirst; no disturbance of the chylopoietic viscera.

Case 8.—Mary B., æt. 6, sister of last patient, was prescribed, at the same time, for a like form of the disease. She has also been subject to occasional attacks of intermittent fever for the last twelve months, which have been checked from time to time by the usual remedies. Her aspect and general health is similar to that of the last patient. She was also ordered the same prescription, which had the effect of at once suspending the disease.

Case 9.—Anna B., æt. 9, sister of the last two patients, was prescribed for August 4th. She has also been a victim of intermittent fever for twelve months or more, the paroxysms recurring every few weeks. The present attack, which has existed several days, offers the quotidian variety. Skin pallid and icterode, and her general health is much impaired. ℞. Chloridi sodii ʒv; mucil. ulmi f℥iiss M. A tablespoonful every third hour, commencing fifteen hours anterior to the time for the next paroxysm. By this treatment, though the disease was not checked, the paroxysm was postponed two hours. The same plan of treatment was directed for the next day, that had been pursued the day previous, which completely arrested the disease.

We may very justly infer from the history of the last three patients, that there was considerable visceral derangement and impairment of the general health. The cases had proved exceedingly rebellious to the ordinary remedies, and even when under the potent influence of sulph. quinia, the paroxysms often persisted for several days *seriatim*. The strongly marked. I regret that the permanency of the cure antiperiodic effects of the chloride here was certainly very was not reported to me.

Case 10.—A negro girl belonging to Mr. C., æt. 15, prescribed for August 5th. She had intermittent fever last autumn, and the ensuing spring, but has been free from it for several months, until to-day. Her general health is moderately good. As it was uncertain what type the disease would assume, she was ordered chl. sodii ʒvj dissolved in mucilage, to be taken in divided doses at suitable intervals, before the hour for the chill to-morrow, anticipating it might prove to be of the quotidian type. The paroxysm returned on the next day, notwithstanding the treatment, and for two consecutive days without any obvious amelioration. Mrs. C. then gave a teaspoonful of corn meal mixed with water, every two hours during the next intermission, after which the disease did not return. There was thirst, but no disturbance of the stomach or bowels from the chloride.

Corn meal, I may remark, is a domestic remedy for ague and fever, often used by this family, and others in that neighborhood, and it is said, in most instances, to check it at once. It would *seem*, in the above case, to have been efficacious. At any rate, the salt was here considered a failure.

Case 11.—A negro girl belonging to Mr. S., æt. 12, prescribed for August 6th. She has had the tertian form of intermittent fever four or five days. Never had the disease before, although it has prevailed extensively in the family. General health good. As the paroxysm was expected in nine hours from this time, she was ordered chl. sodii, ʒi, dissolved in mucilage, *every hour*, until she takes six doses. On the 7th, the disease returned at the usual time, each dose of the chloride having been soon followed by emesis. She was then directed ʒss doses at sufficient intervals to allow ʒvij to be taken during the next intermission. On the 11th, I learned that the vomiting continued, though less frequently, and that the paroxysms still recurred, but in a milder form. Quinia was then prescribed, and the disease immediately subsided. Thirst, but no nausea or dejections.

In consequence of the emetic effect of the salt in the above case, it cannot be considered a fair test of its antiperiodic virtue, as it is probable a very small portion of the amount taken was retained. The paroxysms, notwithstanding, became milder, but this may have been owing to the influence of the vomiting *per se.*

Case 12.—A negro girl, æt. 18, the property of Mr. D., prescribed for, August 20th. Her master informs me that she has had the tertian form of intermittent fever for three months, it having been suspended from time to time by quinia, &c., to return again on the 7th, 14th, or 21st days. She has now had two or three paroxysms, occurring on alternate days. Her general health is somewhat impaired, ℞. Chl. sodii ʒix; mucil. ulmi f℥iij. M. A tablespoonful every three hours, commencing eighteen hours before the next paroxysm is expected. Nine drachms of the salt were taken, which immediately arrested the disease; nor did it return until Nov. 1st, as will be seen by referring to Case 20. No nausea or purging; thirst.

Case 13.—Child of Mr. D., æt. two years; prescribed for August 23d, 1852. It has had the quotidian form of intermittent fever six or seven days; never had the disease before. ℞. Chl. sodii ʒiss; mucil. ulmi f℥ss. M. A teaspoonful every three hours, commencing twelve hours before the time for the next paroxysm. This patient subsequently had several paroxysms; the chloride, as I learned from its father, having produced no obvious benefit and no disturbing effects. It was not repeated. Sulph. quinia was then prescribed which at once suspended the disease.

The parents of this child were of the lower order of Irish, who, as is well known to physicians that prescribe much for them, are not in the habit of rigidly following directions in the administration of medicines; and I have reason to suspect that the mixture was not exhibited properly in this instance.

CASE 14.—Joseph M., æt. 16; prescribed for August 28th. He contracted intermittent fever last autumn, and since then he has suffered with frequent attacks of the disorder, which have been suspended by the preparations of bark, &c. The present attack, which commenced five days since, offers the tertian form. Skin pallid and icterode; but he feels very well during the intervals of the attacks. ℞. Chl. sodii ʒvi; mucil. ulmi f℥ij. M. A tablespoonful every three hours, commencing twelve hours before the next paroxysm is expected. He had a paroxysm at the usual time, on the day he took the above prescription, but none subsequently, although nothing more was taken to arrest the disease. Free vomiting of bilious matter occurred soon after the cold stage subsided.

CASE 15.—Elizabeth M., æt. 12; sister of last patient. She was also prescribed for on the 28th for the same form of intermittent, which had existed with frequent suspensions since the preceding autumn. Skin pallid and sallow; general health impaired. ℞. Chl. sodii ʒvi; mucil. ulmi f℥ij. M. A tablespoonful every three hours, commencing twelve hours before the time for the next paroxysm.

This prescription had no obvious influence in mitigating the disorder, and was not repeated, because the patient lived some distance from me, and did not again apply until she had had four or five additional paroxysms. Quinia was then prescribed at her request, which at once checked the disease. Copious bilious vomiting also occurred in this case soon after the algid stag of the paroxysm, which immediately succeeded the use of the chloride, had subsided.

CASE 16.—Son of Mr. J. S., æt. 2½ years; prescribed for Sept. 17th, 1852. He has had the quotidian form of intermittent fever for several days; has never had the disease before. Health always perfectly good anterior to the present indisposition. The following mixture was ordered: ℞. Chl. sodii ʒiss; mucil. ulmi f℥i. M. Two teaspoonfuls every three hours, commencing twelve hours before the period for the return of the paroxysm. The disease was thus at once arrested. No nausea, but some alvine discharges; thirst.

Case 17.—A sister of the last patient, æt. 5 years; prescribed for also on the 17th, for the same form of the disease. This too is a recent case, and the patient's general health is pretty good. The paroxysms have now recurred for five consecutive days. ℞. Chl. sodii ʒij; mucil. ulmi f℥ij; to be taken in tablespoonful doses every three hours, commencing twelve hours before the next paroxysm is expected. The direction was misunderstood, so that but half the quantity prescribed was administered, which, however, had the effect of promptly arresting the disease. Several dejections; no nausea or vomiting; thirst.

Case 18.—Reuben D., farmer, æt. 40; prescribed for Sept. 17th. He contracted intermittent fever about twelve months ago; and since then, it has continued to recur at irregular intervals, although quinia has been freely used, both to arrest the disease and as a prophylactic. Complexion pallid and slightly sallow; but he feels pretty well during the apyrexia. ℞. Chl. sodii ℥ix, mucil. ulmi f℥iij; to be taken in tablespoonful doses every three hours, commencing eighteen hours before the time for the next paroxysm. This treatment failed to arrest the paroxysms, nor were they postponed or rendered milder. Twelve drachms of the chloride were then directed during the next apyrexia, in ʒij doses every three hours, beginning eighteen hours before the disease is expected to recur. This increased quantity of the remedy had the effect of suspending the paroxysms at once, and most likely it would have done so in the first instance. There was no disturbance of the chylopoietic viscera; thirst.

Case 19.—Emma H., æt. 5; prescribed for Oct. 30th. She contracted intermittent fever about a year since, which has continued with irregular intervals of exemption to the present time. It has sometimes assumed the tertian and at others the quotidian form. She has used for it both quinia and arsenic. The present relapse recurred four days since, and is of the tertian type. Her complexion is pallid and sallow, and there is a feeling of general *malaise.* ℞. Chl. sodii ʒiv, mucil. ulmi f℥iss; half tablespoonful every three hours, commencing eighteen hours before the next paroxysm is expected. This treatment suspended the disease at once. Thirst; no nausea or vomiting; no dejections.

Case 20.—Negro girl, æt. 18, belonging to Mr. D.; prescribed for to-day, (Nov. 1st.) This is the same patient whose case was described in No. 12. She has been free from intermittent fever from that date (Aug. 20th) to the present time, when the disease again appeared in the tertian form. General health improved. Chl. sodium was again prescribed, ʒx, during the intermission, at suitable intervals, which immediately suspended the disease.

By referring to Case 12, it will be observed, that there was a much longer immunity from the disorder, after it had been checked by the salt, than had existed at any time since the disease was first contracted, notwithstanding the *magnum remedium* had been previously repeatedly used to arrest the paroxysms.

Case 21.—The master of the patient (Cases 12 and 20,) called again to-day (Feb. 4th, 1853) for the "salty mixture" which had previously been prescribed for his negro girl with such happy effects, the disease having again returned, after an interval of more than three months. Ten drachms of the chloride were ordered, in divided doses, during the next apyrexia, which checked the paroxysms as promptly as it had formerly done. Nor had there been a relapse up to July 5th, (five months.) No disturbance of the chylopoietic viscera, but thirst as before.

A striking fact will be observed in the history of this patient. The paroxysms were not only at once suspended in every instance, but the disease was kept much longer in a state of temporary extinction, when checked by the chloride, than when quinia had been used for the same purpose. This may be an accidental circumstance, occurring independently of the greater remedial or prophylactic influence of the chloride in this instance; but to justify such an inference would require pretty clear evidence, when we remember the much more frequent occurrence of the relapses after the use of quinia.

Case 22.—Miss Matilda G., æt. 20; prescribed for April 27th, 1853. She contracted intermittent fever about twelve months ago; since then it has continued to recur at irregular intervals, sometimes assuming one form and at others another. She has used arsenic, quinia, &c., which produced a temporary suspension of the disease. The recent paroxysms of fever have been accompanied by frontal neuralgia, which begins and subsides with them; and sometimes the neuralgia occurs alone, apparently as a substitute for the intermittent fever. They have occurred simultaneously for the last four consecutive days. Her skin is pallid and sallow, and she complains of general debility and *malaise.* The following mixture was prescribed to-day: Chl. sodii ʒix; mucil. ulmi f℥ iij. M. To be taken in tablespoonful doses every second hour, commencing twelve hours before the time for the next paroxysm. From some cause or other she omitted one dose, so that but viissʒ of the salt were taken.

On the 28th, the paroxysm returned in a much milder form, having been postponed three hours: repeat same prescription. On the 29th, the disease recurred in a more severe form than yesterday, but was again postponed (one hour). The suffering arising from the combined influence of the two disorders was so great, that the patient was unwilling again to rely on the chloride to arrest the succeeding paroxysm. Twenty grs. of chinoidine were accordingly prescribed, which at once arrested the disease. The salt produced thirst, but no disturbing effects.

Notwithstanding the above case was one of long standing, the general health considerably impaired, and the complication of neuralgia existing, the remedy exercised so favorable an influence, as to induce me to believe it would have been efficient in suspending the disease, if it had been used perseveringly.

Recapitulation.—*Age.*—9 were under ten years of age, 6 between twelve and twenty, 4 between twenty and forty, and 1 at forty.

Sex.—7 were males, 12 females, and 1, sex not known.

Race.—16 were white, and 4 black.

Proportion of Cases cured, benefited, &c.—Of the 22 cases reported, in 12, or 54.5 per cent., viz., Nos. 1, 3, 6, 7, 8, 12, 14, 16, 17, 19, 20, 21, the paroxysms were immediately suspended. Nos. 12, 20, 21, occurred in the same patient.

In 3 of the cases, or 13.6 per cent., viz., 5, 9, 18, one paroxysm only occurred after the remedy was commenced. It was completely successful, therefore, in 15 cases, 68.2 per cent. In cases 2, 11, 22, the paroxysms were postponed or moderated. No. 11, it will be remembered, vomited after each dose, so that the salt was not returned in sufficient quantity to have produced any marked antiperiodic effect. For No. 2, 4, 13, and 15, the remedy was not prescribed a second time, the patients objecting; an increased dose might have arrested the disease. Case 4 did not take all that was prescribed. In one case only (No. 10), after fair trial, was there no obvious good effect from the remedy.

Permanency of the Cures.—In three of the patients only, for reasons which have been elsewhere stated, was I enabled to ascertain with any degree of accuracy the permanency of the cures. Cases 12, 20, 21, which occurred in the same patient, had longer intervals of immunity from the disease each time when checked by the salt, than when quinia had effected the same purpose; and when last heard from, five months had elapsed without a return of the malady. It was said of No. 3, that the disorder did not return so soon as it had previously done when checked by quinia; and of No. 6, it will be remembered, that the patient had not relapsed twelve months after the paroxysms had been checked by nine drachms of the salt, although they had previously returned quite frequently after the use of quinia. So far as the evidence goes, therefore, (which, however, is too limited for a general conclusion,) it indicates the superiority of the chloride of sodium over the usual remedies in the permanency of the cures effected by it. And here we should not lose sight of the favorable influence that *may* have been exerted by the quinia before the salt was prescribed.

The difficulty of effecting positive cures of intermittent fever by any remedy or course of treatment, however rigidly pursued, is very great, and sometimes impossible, even though prophylactics be continually used, as long as the individual remains exposed to the cause which developed it. The writer can here speak emphatically, because he has, on two different occasions, been compelled to "fly his country" in order to get rid of this harassing pest. In a number of cases, and among others now distinctly remembered are No. 6 and 7 detailed above, the paroxysms *would* recur every two or three weeks, notwithstanding quinia with Vallet's mass and other remedies to relieve the disordered viscera, including counter-irritation over them, were diligently plied.

Duration of the Disease, and general Health of the Patients.—In a large proportion of the patients the disease had existed a very long time. Of most of them it is noted, that they had been its victims from six to twelve months. By this it is not to be understood that the disorder then commenced *de novo*, but that it had recurred more regularly and with shorter intervals during that period than previously; for many of them had been its victims for a much longer time, and indeed a few could scarcely remember any period of their lives when they were not from time to time subject to the disease. In four cases (11, 13, 16, 17), the patients had never had the disorder before; and in most of them (all but the very recent ones), there was of course more or less impairment of the general health, with visceral obstructions.

Modus Operandi.—We have seen that chloride of sodium *does* cure intermittent fever, and now the interesting question arises, What is its *modus operandi?* Upon this subject there is a variety of sentiment. It is the opinion of M. Scelle Montdezert "that paroxysmal fevers arise from the presence of fibrin in the venous blood," and that the salts of quinia, and also *chloride of sodium*, "owe their efficacy as antiperiodics to the fact that they dissolve the fibrin abnormally present, thus restoring the venous blood to its normal conditions." (See Dr. Lattimore's paper.) I suppose he means *excess* of fibrin, or of colorless corpuscles (which, as Mr. Paget remarks, cannot, by any mode of analysis yet invented, be separated from the fibrin of mammalial blood),* or of both, constituting the disease which Prof. Bennet, of Edinburgh, calls, very significantly, *leucocythemia*, and which he has recently described as occurring in cachectic states of the system, attended with organic disease of the lymphatic glandular system, and more particularly of the spleen, which he includes in that class. Not having seen the memoir of Montdezert on this subject, which was presented to the French Academy of Medicine, I am unable to say how his conclusions were arrived at; whether they are the result of a carefully conducted analysis of the blood, before and after using the remedy, or merely a conjecture. It would be necessary, in order that his views be generally adopted, that they should be based on very satisfactory evidence. The enlightened state of medical science at the present day, and the rigorous exactness to which it is aspiring, demands that all its facts should rest on the most indubitable evidence of their truth.

It is believed by M. Piorry (who was one of the committee appointed by the Academy to report upon the memoir of M. Scelle Montdezert), that enlargement of the spleen is the cause of all paroxysmal fevers, and that chloride of sodium cures intermittent fever, like the sulphate of quinia, by acting on the spleen and diminishing its volume, and this sometimes in less than a minute. We are prepared to admit, that the spleen, when of abnormal size, *tends* to keep up the disease when once contracted, and that it is diminished in volume by sulphate of quinia and chloride of sodium (but not *pari*

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* Kirkes & Paget's Manual of Physiology.

passu) with the fever; for we feel quite sure that the fever is often cured, whilst the spleen remains moderately enlarged. And the fact which he announces, that "whenever the spleen has a greater length (measuring in a line from the middle of the axilla to the anterior superior spinous process of the ilium) than from 31 to 33 lines, intermittent fever exists," is certainly *not* true in the malarious districts of this country, if it is otherwise in the field of Piorry's observation. If this were a fact, there are very few of the denizens of *our* miasmatic regions who would not be doomed victims of the disease; because, as has been already stated, enlargement of the spleen (often to the extent of 31 or 33 lines in its longitudinal diameter) exists almost universally in such localities, in persons who have for some time resided there, even though they may never have had intermittent fever, and *a fortiori* in those who *have* had the disease, but have for a long time enjoyed an absolute immunity from it.

A theory of its mode of acting, which, it occurs to the writer, is more consistent with reason and established truth, is, that chloride of sodium (being an antidote to the poison which produces intermittent fever, in certain doses) enters the circulation by means of absorption, and neutralizes the miasmatic effluvia which probably operate on the system through this channel; or, in other words, that it develops a condition of the system which is inconsistent with the existence of malarial disease.

We know that bark is an antidote to the miasmatic poison, because, in most instances, its constant use will keep off such diseases from individuals who have been subject to them, and that they return when the remedy is omitted, if the individual continues exposed to the cause which produces them. We can have no better illustration than this of the sequence of cause and effect. Our experience with chloride of sodium in paroxysmal fevers has not yet been sufficient to determine accurately its value, in preventing a recurrence of the attacks when constantly used; but there is every reason to believe it will prove not much inferior to the preparations of bark, and for the same reason.

Common salt may also act beneficially in intermittent fever by increasing the quantity of red globules in the blood, thereby removing the anemia which is one of the most constant concomitants of the disease. According to the experiments of M. Plouviex, made upon himself at intervals during twenty-five months, a saline regimen has the effect of *increasing the weight and strength of the body*. He began with a teaspoonful daily, which he increased to a tablespoonful, continuing to take this dose on several occasions, for a period of three or four months. The regimen appeared to produce *plethora*. The blood, analyzed while under the full effects of the salt, was found to contain more of the *globules* and salts, but less of the albumen and water.—*United States Dispensatory.*

Dose and Mode of Administration.—The quantity given varied from eight to twelve drachms during the apyrexia. At first, eight drachms were given, but the amount was subsequently increased to nine, ten, and even twelve drachms in one instance, with obvious benefit. Children required somewhat larger proportional doses than adults.

Mucilage of elm was selected as the vehicle, on account of its convenience, and because it sufficiently disguised the remedy, which was deemed a matter of importance; for it would have lost much of its efficacy, or have been repudiated altogether, had the patients known they were taking simply common salt; as it is well known to physicians that the influence of the mind upon this disease is very considerable. The following was the formula used:

℞. Chloridi sodii ℥iij.
Ulmi pulv. ʒiij.
Aq. bullientis f℥viii.

Infuse two hours and strain. This forms a saturated solution. Dose, a tablespoonful every two, three, or four hours, so that five or six doses may be taken during the apyrexia. It was not deemed necessary to precede its employment by evacuants, because the patients had recently used such remedies during their former attacks; and moreover, I preferred to use the salt alone, because its real value could thus be better determined. When it is necessary to precede the use of the salt as an antiperiodic, by emetics or cathartics, perhaps there is nothing better for the purpose, in ordinary cases, than the same remedy administered in emetic doses, which will usually produce also moderate catharsis.

Disturbing Effects.—In most of the cases the remedy was well tolerated by the stomach, nausea or vomiting having occurred in but four (3, 11, 14, 15). Four cases also (2, 3, 15, 17,) had moderate alvine evacuations, unattended with pain. There was considerable thirst in every case; no other unpleasant effects. When given in the above manner (dissolving it in as small a quantity of water as is possible), it is less likely to disturb the stomach, than the same or even a less amount would in a larger proportion of the solvent. The taste was objected to by some, whilst others disliked it much less than quinia.

Conclusions.—From our experience of the antiperiodic virtues of chloride of sodium as detailed above, we think the following conclusions may be legitimately deduced:

I. Although inferior to cinchona and its preparations, it yet forms a *very good substitute* for them in intermittent fever, having failed, as we have elsewhere seen, to produce a speedy suspension of the paroxyms in 31·8 per cent. of the cases only: in a majority of cases therefore it may be substituted for quinia.

II. It may be used instead of, and indeed *preferably* to quinia, first, in cases not unfrequently met with, where the latter remedy is forbidden by the very unpleasant nervous and cerebral symptoms it produces (delirium, tinnitus aurium, cephalalgia, faintness, &c.), an example of which I have recently seen in the New-York Hospital, when sulph. copper was substituted. Secondly, where quinia, from frequent repetition, has lost its effect in ague. Thirdly, it is commended on the *score of economy*, which is a consideration of importance to the poor especially, who are now in a measure debarred from the use of quinia by its high price. And fourthly, it is always at hand, whilst quinia sometimes cannot be obtained.

III. It has been found to be *more energetic* in curing ague than any of the vegetable or mineral tonics commonly used for that purpose, excepting bark, and should therefore be preferred to arsenic, which has been ranked by M. Andral, Prof. Wood, and indeed most other authorities, next in value to quinia. And moreover, I think arsenic should never be used until after quinia and *common salt* have failed to do good, on account of its unpleasant and sometimes disastrous consequences to the general system and stomach, and the increased facilities it affords for using the remedy as a toxicological agent.

Green Ave., January, 1854.

ART. II.—*Case of Perforation of the Rectum, followed by an Extensive Fæcal Abscess of the Nates.* With Illustrations. By LEWIS A. SAYRE, M. D., Surgeon to Bellevue Hospital, etc., etc.

ON Saturday, 23d July, 1853, I was called about 11 P. M. to see the Rev. Dr. B., who was said to be dying with what was called "Neuralgia of the Rectum." He had had a severe rigor about 4 o'clock that afternoon, which lasted about three hours, and left him in a state of great prostration.

I found him bolstered up in bed between two persons, who were fanning him, chafing his temples, and endeavoring to make him swallow some stimulants; his surface was cold and clammy, bathed in perspiration—mouth partially open—lips almost bloodless—pulse 140, very feeble and intermittent—constant hiccough, and complaining of intense pain in the rectum and nates, with an inability to pass his urine. Upon placing my hand upon his nates, I distinctly felt crepitation, and heard gurgling of air, deep underneath the glutei muscles, which were hard, firm to the touch, and distended in all directions to such a degree as to make his nates much too large to correspond with his legs, arms, and other parts of his frame. On passing my finger into the rectum, I distinctly felt the edges of an old, hard, and well-defined ulcer, situated just below the upper edge of the superior sphincter, and in the posterior aspect of the intestine. I immediately pronounced it a case of internal fistula, or a fæcal abscess, which had been caused by the escape of fæces through the perforation of the bowel. But I found it impossible to convince him of the correctness of my diagnosis, as he had been most positively assured by his homœopathic attendant (who had been in attendance previous to my being called, and who had seen him that very day) that it was a clear case of pure "Neuralgia of the Rectum," or "Rheumatic Gout of the Rectum," and they had thoroughly succeeded in convincing him of the correctness of that diagnosis.

By continued gentle pressure upon the two nates, the air was expelled into the rectum, and the pressure being taken off from the bladder, he was enabled to pass his water, and was much relieved of his intense suffering. As he had had no sleep for many days, and was much exhausted, I administered an anodyne with stimulants, and ordered him some broth, and covered the nates with an anodyne poultice.

24th.—I saw him early in the morning, and found that he had passed a comfortable night, and had had more sleep than for two weeks past; but was still unwilling to admit the correctness of my diagnosis. I therefore sent for Professor Parker, who came immediately and examined him with his finger in the rectum, and perfectly confirmed my previously expressed opinion; but finding him so extremely reduced that it would be dangerous to hazard his life by so extensive an operation as it would require to lay open the immense abscess which had been formed, he therefore advised that I should endeavor to sustain his system awhile, allay the pain by narcotics, remove the inflammation and hardness of the nates by the constant application of poultices, and express the air whenever the cavern became filled with gas, and to postpone the operation until his system was better able to rally from the shock which it would necessarily produce.

25th.—Found him suffering great pain in the nates, and very restless—had had a free passage from the bowels of softened fæces about six hours previous, without much pain at the time of the passage, but in from two to three hours after the operation the pain became intense, and the fulness and distension of the nates much more marked; this he stated had been the case after every passage for some months, the pain always being very much worse some hours after the operation than at the time of the passage. I accounted for this phenomenon from the fact that at each passage a small portion of fæces would escape through the perforation, and, in a few hours, becoming decomposed, would form a large amount of gas, and thus, by its distension, produce the pain. By gentle pressure upon the nates the gas could be easily expelled into the rectum with immediate relief from the pain, after which he would be comparatively easy until the following day, when, after another passage, the same routine would be passed through. He continued in the same condition, with but slight change, for eight days, when the excessively hot weather caused such rapid decomposition that I was summoned in haste to see him, and found him cold, almost pulseless, constant hiccough, great tympanitis, and retention of urine. On passing the catheter until I reached an inch or more beyond the ordinary length, the water began slowly to flow out of it and to drop immediately from the extremity of the catheter, without describing an arc, pressure being required over the bladder in order to empty it. The bladder contained only about half a pint of urine, and the abdomen was as much distended as before the urine was drawn, and much more resonant upon percussion. Upon examining his nates I found the whole glutei muscles of either side distended to their utmost, and just between the tuber ischii and trochanter major of the left side, about six inches from the anus, finding a more prominent point than at any other place, I plunged an exploring needle into it, and was compelled to pass two inches and a quarter before the point became free; when I withdrew the instrument, it was instantly followed by a shrill, whistling noise, and the most offensive odor that I ever experienced. Another opening was made in the opposite nates, through which the gas escaped freely; but, as the great tension had been removed, it was not accompanied with the same whistling sound which attended the first puncture. As soon as the gas had escaped, his breathing became easy, his abdomen flaccid, and all his symptoms of immediate suffocation subsided. Finding from the odor that the cavern contained other material than gas, I made a free incision into the first puncture, and to my utter amazement obtained, by measurement, over one quart of fæces and matter, in addition to what was necessarily lost in the tapping. After the incisions, an injection, passed in at one side, flowed freely out at the opposite opening. A probe passed readily from each of these openings into the rectum and swept over a large surface under the glutei muscles, but his condition was entirely unfit to risk the incision through the muscles into the rectum.

He continued rapidly to improve after these free incisions were made, having his bowels regularly moved every day without assistance, and at each passage a free discharge of fæces from each of the openings; after which it was injected freely to keep the cavern clean, and he was fed on the most generous diet with stimulants.

In ten days after the abscess had been punctured, his general health had so much improved, that upon consultation with Dr. Parker we concluded that it would be safe to make the incisions into his rectum, but on account of his great debility we were afraid to administer any anæsthetic, and were compelled to rely chiefly upon brandy to enable him to sustain the operation.

On the 13th August, assisted by Drs. Parker, Thebaud, and Mr. Bartholf, my student, I proceeded to make the necessary incisions.

The patient was laid upon his side and face, with his limbs slightly flexed, and nates exposed to a good light, when a probe was passed, from the right external opening four inches from the anus, three inches and a half before it reached the ulcer in the intestine. With a long probe-pointed bistoury pushed down upon the finger in the rectum, a single cut sufficed to lay the parts freely open. The parts divided were firm, almost cartilaginous, from long-continued inflammation. There was not much hemorrhage, but still the patient sank considerably and required very free use of brandy. After some few minutes, however, he rallied, the pulse became stronger, and it was thought by those present that he would be able to bear the incision upon the opposite side. Not having a probe-pointed bistoury of sufficient length to reach from the external opening into the rectum, which was nearly six inches, I took a long straight-pointed knife, and passed it down upon my finger into the rectum, and made a rapid incision through all that portion of the gluteus maximus muscle included between it and the anus. The hemorrhage was considerable, but readily checked by ice and pressure, only one ligature being required.

The patient bore the operation with the most heroic fortitude, never uttering a groan or complaint, and at its completion expressed great delight that it was over, and immediately rolled upon his back, and swooned. His mouth fell open, the surface became pale, the pulse ceased at the wrist and elbow, and the heart was scarcely audible, respiration ceased entirely, and in fact he was to all appearances *dead*. Immediate resort was had to artificial stimuli, as mustard and hot water externally, and brandy and ammonia was attempted to be administered internally; but finding him unable to swallow, artificial respiration was immediately resorted to, and it became necessary to continue it for some minutes before respiration took place, after which brandy and ammonia were administered, *ad. libitum*, until complete reaction ensued, which occupied nearly an hour and a half from the operation, during which time he drank over a pint of brandy, and nearly a half ounce of aqua ammoniæ.

The cavern, which was considerably larger than the head of a fœtus at the sixth month, and lined with black, ragged, fetid sloughs, was then filled with lint, saturated in Le Doyen's disinfecting fluid, and covered with ice to prevent hemorrhage. I administered 15 drops of Magendie's solution, and left directions for him to take brandy and beef-soup every hour. In the evening I found him tolerably comfortable, pulse 110, but quite firm and regular; had had three hours of refreshing sleep since the operation, but was unable to evacuate his bladder, which was emptied by the introduction of the catheter, which operation was repeated about 12 o'clock at night.

August 17, 6 A.M.—Introduced the catheter and evacuated the bladder, which had not yet recovered its contractile power, and required pressure over the abdomen in order to make the urine flow. In all other respects as comfortable as could be expected.

1 P.M.—After again drawing off his water by the introduction of the catheter, with the assistance of Dr. Thebaud and Mr. Bartholf, I removed the lint from the wound, which was excessively offensive, and made a more careful examination of the cavern than had been done the day before.

The coccix had sloughed from the sacrum, and two of the coccigeal bones were found loose in the wound; the fingers could readily pass under the swollen integuments on the posterior aspect of the sacrum, nearly as high up as its junction with the lumbar vertebræ. In order to relieve the tension over the sacrum, a third incision was deemed necessary, and made between the two others, nearly parallel to the sacrum, and about two inches in extent; the sacrum was not denuded of its periosteum, except at its coccigeal extremity, which was readily felt to be exposed, by the probe or finger-nail. The sacro-ischiatic ligaments of the left side were exposed and partially sloughed, hanging with ragged shreds. The fat in the recto-ischial fossæ of either side had been entirely destroyed, leaving a cavern which would readily receive the two fists of an ordinary-sized adult; the tuber ischii of either side were exposed, but not denuded of their periosteum; just external to the tuber ischii of the left side, deep under the muscles, a sinus was discovered running in a curved direction 6 3-4 inches to a point just back of the scrotum, and, by elevating the limb, gave exit to about a wineglass of pure healthy pus. The upper border of the ulcer, which had been the commencing-point of all the difficulty, was thick, hard, and white; the lower and back portions between the incisions had sloughed away; the whole cavern was of a greenish black color, and excessively fetid; the walls of the abscess were from an inch to two inches in thickness.

After washing out the intestine by an injection, the abscess was carefully injected with Labarraque's solution, and dressed with lint saturated with Le Doyen's disinfecting fluid and tinct. myrrh, and covered with a yeast poultice. The dressings were changed and the catheter introduced every six hours for the succeeding four days, after which he was enabled to evacuate his bladder without assistance.*

The discharge was very copious and offensive, and at each dressing a large amount of sloughing shreds were washed off by the injection. He was fed upon the most generous diet, and brandy and quinine were administered liberally. In about ten days from the operation, the wound had assumed a healthy aspect, and granulations were abundant, particularly from the deepest part of the abscess, around the edges of the ulcer, where the growth was so rapid as almost to assume a fungous appearance, and for some time I hesitated about the propriety of its removal, fearing that it might be malignant, as the patient had lost two sisters by cancerous disease.

But, by the advice of Dr. Dupierris, a distinguished and accomplished surgeon of Havana, I was induced to let it remain, as he stated that he believed, in so deep and large an abscess, the central part would grow up more rapidly than the rest, and act as a sort of pillar or central brace to which the sides could be afterwards attached by paring the edges and bringing them together. This was a new idea to me, but I am frank to confess, from the result in this case, it seems to be practicable.

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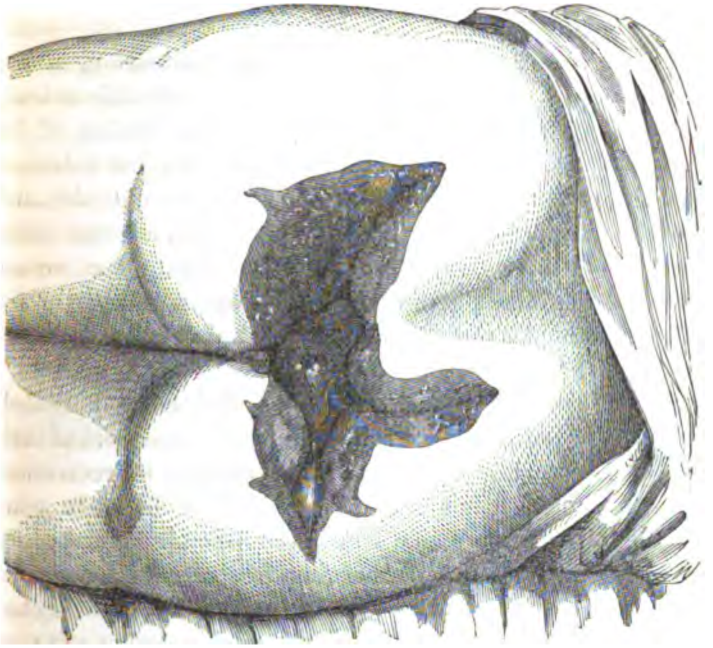
* From the 11th of August to the 15th the thermometer ranged unusually high, and on Sunday the 14th over 100 persons died from the effects of heat in this city and Brooklyn.



The above drawing, by Mr. Rennie, was made four weeks after the operation, when the wound was reduced more than one-third by the abundant granulations which were forming in it, and, with the exception of the deep and narrow sinus upon the left side, which extended down as far as the scrotum, everything was healthy; this was injected with iodine without any benefit, and I then wished to draw a lead seton through it, but was unable, as the probe came down against the ramus of the ischium and pubis. I therefore covered the probe about six inches, by melting upon it nitrate of silver, and then passed it into the sinus, and left it until the caustic was dissolved. This fortunately excited a healthy inflammation and closed the sinus, and on the 1st of October, with the assistance of Dr. Thebaud, I pared off the edges of the wounds, and also the fungous central tumor of its mucous covering, and brought the edges together by two straight ordinary darning needles and a twisted suture, one needle on either side, and dressed with adhesive straps and pressure.

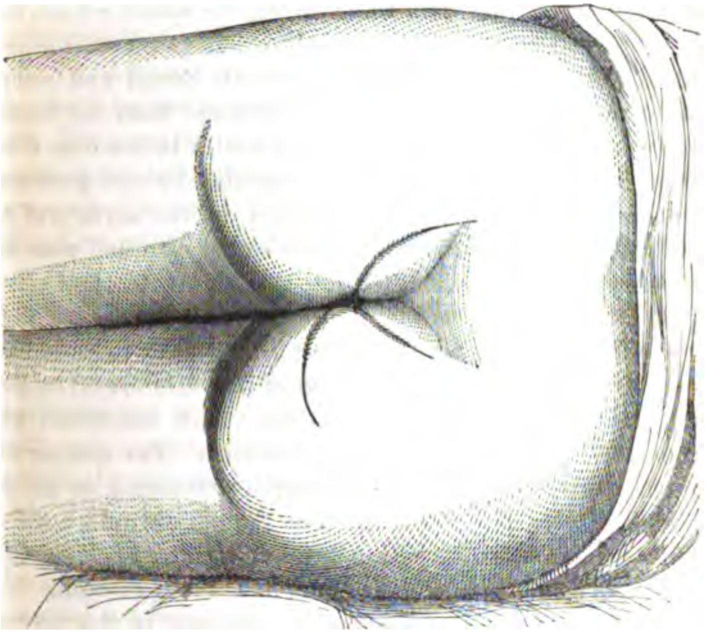
On one side union took place by first intention, of the whole wound, and on the other to a considerable extent; but finding it too close to admit of free flexion of the body, and also obstructing the passage from his bowels, I was compelled to destroy the adhesions on one side, and allow it to granulate from the bottom with a much wider cicatrix. A large bougie was introduced into the rectum daily, and retained some minutes in order to prevent too much closure of its orifice, and the wound dressed with lint spread with Turner's cerate.

On the 1st of November the parts had entirely healed, leaving him perfect control of his anus by some sort of artificial sphincter, and Dr. B. left for the country for recreation, his general health being much better than for some years previous. An issue which I had established in his arm about six weeks previous was discharging freely, and I have given him directions to continue with it through life. Having had asthma and slight cough for some years, together with repeated hemorrhages from the bowels, and this being the third time he had been operated upon for fistula within ten years, and as nature seemed determined to have some drain, I therefore placed it in his arm.

The accompanying drawing represents the parts as healed.

As I intend making a few remarks on this truly formidable case, which, so far as I am able to ascertain, is by far the most extensive case of fæcal abscess on record, it seems necessary that I should give some history of its formation, and also the previous condition of the patient.

Dr. B. is a man of large muscular frame, and is of a nervosanguineous temperament. He has been afflicted with severe attacks of asthma and some slight cough since the age of puberty, with almost weekly hemorrhages from the bowels. For many years he was a close student, and lived a very sedentary life, which induced severe and obstinate constipation, which eventually produced hemorrhoids, and finally a fistula, which continued open and discharging for some years, during which time his cough ceased and his attacks of asthma were not so frequent or severe.



In 1847 he was operated upon by a surgeon of this city, and the fistula partially healed; he still suffered great pain at stool, and there was constantly a discharge of pus and blood per anum.

I saw him first in September, 1850, and found a small fistulous opening in the left side of the anus, running close by the side of the intestine, and opening into it just above the superior sphincter. I laid it freely open, dividing the sphincter, cauterized the whole extent of the wound with nitrate of silver, and succeeded in causing firm granulations and a cicatrix, from its deepest points of opening in the intestine, in about three weeks. Soon after this, while travelling in the northern part of this State, he had a very severe attack of asthma, almost threatening suffocation, which was followed by a cough, which has been more or less persistent until the spring of 1852, when he began to suffer from the common epidemic of carbuncles and furuncles which has been so prevalent in this region for the past two or three years. He continued suffering from these during the whole season, having in the space of six months no less than 47 on various parts of his body. During all this time his cough and asthma were very much relieved, the hemorrhage from his bowels had ceased entirely, and his general health better than it had been for years previous, which he considered a very good compromise. As the suppurating ulcers on the surface of the body began to heal, his asthma and cough returned more frequently, and his bowels became more irregular and constipated.

In March, 1853, whilst making great effort to pass hardened fæces, he had slight discharge of blood, followed by great pain and uneasiness in the rectum, which continued with more or less severity until the operation. For one or two months after this, the pain would be *most intense at the time* of the *passage*, but since that time the pain would come on with greater severity, with a sense of fulness and tension of the parts some three or four hours *after* the operation.

One or two gentlemen of great eminence in this city examined him at this time with the speculum, but detected nothing except a very firm contraction of the sphincter, and were disposed to regard it as a case of stricture—the ulcer not being detected, as it was situated below the superior border of the sphincter, instead of above it, which is by far the most common position. Dr. S. P. White, however, who examined it in May with his finger, stated that he felt what seemed to him to be the edges of an ulcer, but having no speculum he could not be positive; and it is highly probable that the firm contraction of the sphincter was dependent upon the presence of this ulcer in the fibres of the muscle, acting as a source of irritation. From this time he fell into the hands of the Homœopathists, and the result has been detailed above.

Observations.—In the first place, we notice in this case an affection of the lungs of many years' standing, and a varicose condition of the hemorrhoidal veins, relieved by the establishment of a fistula, and by abscesses in various parts of the body, and aggravated by the arrest of these discharges; thus proving the necessity of establishing an issue in some part of the body, when we wish to heal a fistula in a constitution complicated with pulmonary difficulty or a hemorrhagic tendency.

2d. The position of the ulcer. It may be in the fibres of the sphincter and difficult to detect, and not invariably above the muscles, which is the common position.

3d. That after an abscess has been formed, the pain is much more severe some hours *after* the passage from the bowels, when gas has been formed from decomposition of the escaped fæces, than *at the time* of the operation.

4th. The immense collection of fæces and pus, with extensive destruction of the parts, and depth of the sinuses, without making any attempt to ulcerate towards the external world, which is the general tendency of all foreign bodies.

5th. The singular fact that the granulations from the bottom of the abscess were so much more abundant than at any other place, as to assume a fungous excrescence of two inches in length, and nearly two inches in circumference at its base, and eventually became attached to the surrounding walls and converted into healthy tissue.

6th. The wonderful recuperative powers of nature, that were enabled to repair such extensive destruction of parts, and the replacing of so useful and perfect an external sphincter.

ART. III.—*A Case of Sclerema, or Induration of the Cellular Tissue of an Infant; with Remarks.* (Read before the Society of Medical Inquiry.) By CHAS. D. SMITH, M. D., Surgeon to Bellevue Hospital, N. Y.

DURING the last year, I have had under charge the male infant of a lady of this city, with a swelling of one of his hands, which presented peculiarities not usually met with. The history of the case is as follows:

The child was born in the month of December, 1852, in every respect free from disease. Six weeks after birth, a swelling commenced on the dorsum of the right hand, and, gradually increasing for a period of six months, finally attained to three times the size of its natural dimensions, and then ceased. The tumefaction, extending from the second joint of fingers to about an inch and a half above the wrist, was convex in shape, and almost of the hardness of marble. The temperature was much below that of the surface of every other part of the body, and was generally whiter than the surrounding skin, although at times it would assume a dark red or purplish hue. The infant experienced no pain from it, using the hand as freely as the other; no impression could be made upon it by pressure, unless considerable force was used. The health of the child was unimpaired; every organ performed normally its functions, and there was no interruption whatever to his natural growth and thriving. He would occasionally have attacks of colic, which did not always immediately yield to treatment, yet they did not differ materially from the same complaint in other children. His sleep was natural, appetite good, and he was possessed of the ordinary intelligence of children of that age. Vaccination passed through its progress satisfactorily, and for the last two or three months dentition has gone on without affecting the system unpleasantly, showing that no constitutional cause existed.

The disease corresponds with what authors have described under the name of Sclerema,—induration of the cellular tissue, or skin-bound disease. The treatment which I adopted was of no avail. It consisted of embrocations, unguents composed of iodine and mercury, vapor douches and the like.

Remarks.—In examining the different treatises on diseases of children, very little is found explaining in a satisfactory manner the true nature of this affection, or from which we can derive instruction of any great practical value. Its character, pathology, and treatment, are not understood, and there appears to be considerable diversity of opinion among writers in regard to it. The following is a *resumé* of the writings of medical men who have given this disease particular investigation, several of whom have had frequent opportunities of watching its progress in the hospitals for children in Paris.

The term "sclerema" has been employed to designate this disease; and by it, no doubt, is understood hardness or induration. Its locality is the areolar tissue, and may be general or confined to particular regions, as the face, neck or extremities. Infants are the usual subjects of it, although cases have occurred in children and adults.

Symptoms.—The disease usually shows itself from two to twelve days after birth, and is characterized by an engorgement, swelling, coldness, and rigidity of the part affected, resisting the impression of the fingers. Sometimes it manifests itself at the commencement of fever, or it may be preceded by it two or three days. The skin is smooth and shining, and appears stretched firmly over and bound down to the subjacent parts, and conveys to the touch the sensation of a frozen dead body. The color varies; it may be red, purple, a dirty-white, or yellow, like wax exposed to the air. The system, when the disease is extensive, is more or less affected. Swallowing becomes difficult, resulting frequently in trismus.

The infant does not nurse, utters constantly feeble and plaintive cries, and respiration becomes labored. This may continue some time, usually four or five days, and finally ends in death. M. Bouchut, formerly Interne of the Hôpital Necker, Paris, says: "Many children with this malady retain for a long time the power of motion, using freely their arms and legs; with others there is a stiffness of the whole body. When seated on the face there is usually great difficulty in opening the mouth, or moving the lips. The cutaneous sensibility is preserved throughout the whole body. They appear at times to suffer greatly, crying in a sharp, shrill, yet feeble tone, the peculiarity of which has attracted the attention of medical men, and has been compared by some to the crying of young mice. Cough does not always appear at the commencement of the disease, but it shows itself after a while, and accompanies it to its close. Respiration is ordinarily feeble and incomplete; in some cases, however, it is very rapid, and presents the characters of the hurried respiration of pneumonia.

Diagnosis.—The disease may be distinguished from ordinary œdema of adipose tissue by its hardness, and not yielding to pressure, by the suddenness of the attack, and the coldness of the part affected.

Elephantiasis, although attended with œdema and hardness, and occurring on the face and extremities, is generally developed in small tumors, varying in size, and is unlike sclerema, inasmuch as the skin in the former is uneven and wrinkled, while the latter is smooth and even.

According to some authors, it may be confounded with the adipose induration which occurs sometimes on the approach of death; but the history of the case will generally prevent confusion on this point.

It is often complicated with other affections, and the most frequent is icterus. It has also been associated with pulmonary congestion, lobular pneumonia, intestinal irritation, colic, and disease of the heart.

Causes.—M. Paletta, of Italy, in a paper read before the Institute of Milan, attributed the cause (in newborn infants) to incomplete respiration, from an insufficient development of caloric, producing torpor and coldness of the extremities, followed by induration of the cellular tissue.

He noticed they occurred more frequently during the spring and fall.* Other authors agree with him in attributing the cause to the same influence, opining that "the cold, interrupting the insensible perspiration, retards the circulation, and condenses the mucous and serous fluids in the tissues."

M. Billard, in his work, exhibits statistics to prove that cases are more often seen during the winter. M. Pastorelli, of the Foundling's, near Trento, Italy, observed it to be particularly prevalent in May and August.† Underwood, Denmard, Audrey, and Dugos, ascribed it to cold. M. Breschet, to an open state of the foramen ovale; and M. Denis, to an inflammatory affection of the cellular membrane. M. Barron, of the Hôpital des Enfants trouvés, considers it a simple infiltration of the cellular tissue, owing to derangement of either heart, lungs, or large vessels. Others, to an imperfectly developed state of the child, to a cachectic condition of the mother, or to premature birth.

Prognosis is only favorable when the disease is local, and unaccompanied with any organic affection.

Pathology.—It will be perceived that great difference of opinion exists with regard to this branch of the subject. There are some who regard induration of the cellular tissue as the original and primary disease; others, on the contrary, attribute it solely to some internal lesion. Post-mortem examinations have discovered a yellowish or greenish sero-albuminous fluid in the cells of the areolar tissue, and the hardness has been ascribed to the coagulable quality of this fluid, as well as the condensation of the fat, the result of mechanical pressure. Many regard sclerema as an affection of the skin; others think it answers in all respects to the characters of simple œdema. The skin and areolar tissue have been found quite dry, no fluid flowing from it when cut, but infiltrated with an exudation similar to the congealed fat of animals. The lesions which appear the most important are those which have been noticed in the internal organs, consisting of sanguineous engorgements of the lungs, brain, and liver, and a stasis of the blood throughout the whole venous system.

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* Archives Générales de Medecine, Vol. v.

† Dublin Quarterly Journal, Feb., 1853.

The methods of *treatment* suggested by writers do not vary materially. So much uncertainty still exists with regard to the true nature of the disease, so little understood is its pathology, that no rational plan has been proposed.

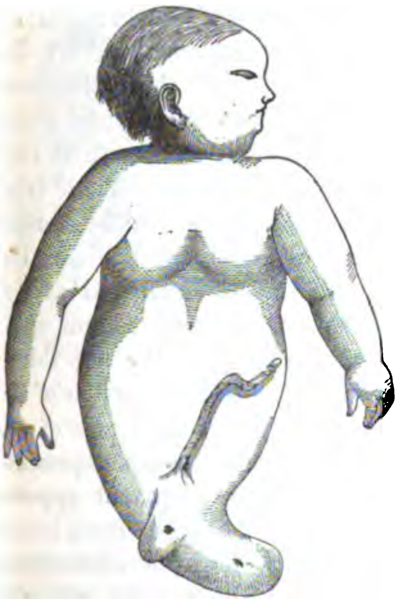
The indications are, 1st, to remove all internal congestion by suitable evacuants, followed by proper stimulation. 2d, to endeavor to soften the indurated parts, and bring back heat; this may be accomplished by exciting the skin with irritating frictions, thus restoring the capillary circulation, and promoting the absorption of the effused fluid. Leeches, blistering, unguents of iodine and mercury, have been employed, fomentations of emollient and tonic decoctions, such as bran and cinchona, have been advised, and in some instances have been of service. Scarifications, electricity, and bandaging, have their advocates, and are useful; but, on the whole, treatment in ordinary cases seems of no avail.

ART. IV.—*A Case of Congenital Malformation*, (with Illustrations.)

By JOHN G. SEWALL, M. D., Physician to the Northwestern Dispensary, N. Y.

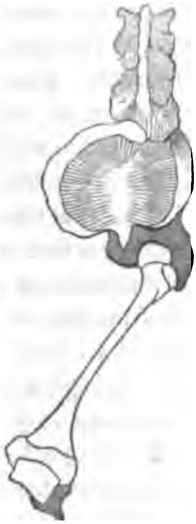
MRS. McD., born in Ireland, though a resident of the United States from infancy, 32 years of age, married at 19, always by report in good health, is the mother of seven children. All, previous to the subject of this paper, were large, healthy, and easily born. While last pregnant she reports herself unusually well. Labor, at full term, was tedious two days and nights by report, yet natural. The placenta was very small, delivered naturally. Says she never was off her knees since the quickening, and to this circumstance attributes the malformation. Was attended in her confinement, August 2d, by a female. Infant survived twenty minutes.

Post-mortem, Aug. 3d.—External conformation of head, trunk (as far as umbilicus), and upper extremities natural. From below umbilicus, there is a sudden narrowing of the abdomen, as if from a pressing together of the ossa innominata, presenting a sharp-feeling, curved projection at their pubic portion. Instead of the lower extremities, there is found, projecting from a point a little to the right of the median line, a stump four inches in length, curving upwards, like the arc of a bow, and inclining to the left. Its right outline is continuous with the curve of the right side of the body. Its left forms an obtuse angle with the left side of the body. Its extremity, not bifurcated, but pointed, presents no scar. On its upper side, three-fourths of an inch from its extremity, there is a small fistulous opening terminating in a cul de sac. From the upper surface of this stump, at its junction with the trunk, there depends the scrotum of natural size, upon the upper surface of which, near its centre, is a small pocket, whose opening, directed upwards from the surface, upon careful examination, is found to conceal within its fold what appears to be a miniature glans penis. This glans is about the size of a No. 3 shot, of a purplish color, furnished with a corona and a frænum, and is sheathed within the pocket like the natural glans within the prepuce. There is no trace of a meatus. This glans further connects with what seems to be a rounded cord simulating the corpora cavernosa. There is no trace whatever of an anus. About three inches from the root of the scrotum, at the median line of the back,



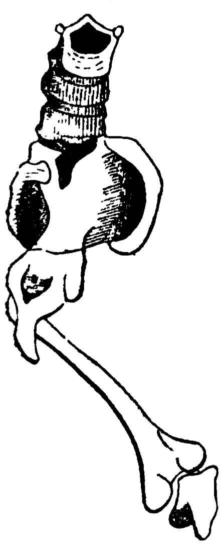
is a small nipple-like projection of skin. The cord is natural, and arises from about one and a half inches above symphisis pubis. Entire weight of body four pounds.

Dissection.—Brain not examined. Organs of chest natural and healthy. Liver of usual prominence, natural. Small intestines natural. Large intestine terminates at the left iliac region in a cul de sac of a pear shape, about the size and color of the adult gall bladder. It is contained within a fold of peritoneum which is loosely attached to the posterior wall of the abdomen. Otherwise, it floats freely in the cavity of the abdomen in an isolated state. Bloodvessels are distinctly seen to ramify on its surface through the peritoneum. The kidneys are of natural size, and in their natural situation, but entirely disorganized, containing within their capsules only a soft, pultaceous, homogeneous mass. There is no trace whatever of a bladder, and no ureters can be demonstrated. Within the scrotum was found one testicle; the other was still in the abdominal cavity. The stump above referred to, on close examination, proves to be the left thigh, though connected with that portion of the pelvis situated upon the right side of the body, its naturally posterior aspect presenting anteriorly. Its development appears to be perfect in form, though much below the normal size, it being but about three inches in length. The patella, with the ligamentum patellæ, occupy their normal situation, project pointedly upwards, and complete the lower extremity of the stump. The pelvis has undergone a marked arrest of development, especially in that portion represented by the right ilium, it being not more than one half the size of its fellow, both being far below the normal average. They are united by bony tissue, presenting one compact mass, whose entire width does not exceed one and one-half inches. There is



furthermore apparent a remarkable twisting of the ilia upon their own axes, by which the right one has come to occupy to a great degree the situation naturally belonging to the left. In this way is to be explained how the left thigh presents itself upon the right side of the body in a reverse position. The pointed crest in front of the ilia is evidently formed by the ischia and ossa pubis applied to each other in an imperfectly developed state.

Nothing definite as respects the sacrum and coccyx can be determined. These are, however, applied to the last two lumbar vertebrae, themselves in an imperfect state. Several small plates and prominences of bone irregularly disposed and closely compacted together, which probably represent their component parts in an arrest of development. With the exception of these irregularities the spinal column is in its natural condition.



The peculiar disposition of the parts above noticed, together with the absence of some of the viscera, and the arrest of development in others, may be explained on the supposition of violence done to the fœtus in an early stage, by which, a change in normal development being produced, an arrest of any subsequent evolution in the direction of the injury, as well as of the processes already established, is produced.

226 *West* 30*th-street.*

Art. V.—*On the Ultimate Cause of Malarial Diseases.* By J. R. Black, M. D., Ohio.

It is a trite yet just observation that the road to truth is slow and laborious. This, the philosophic physician is free to confess, applies with peculiar emphasis to the science of medicine. True, there is not now, nor has there been, a lack of discoveries to extend the boundaries of our knowledge; but, unfortunately, in very many instances, this knowledge is either so elementary or complicated as to be neither reliable nor satisfactory. Nor can this imperfect state be attributed to a want of patient and distinguished effort. The teeming medical press can testify to its abundance on the one hand, and a candid intelligence must award it a long list of profound and searching intellects on the other.

Inferior minds, who follow the beaten path of medical investigation, may strive in vain for an original thought. If they are desirous to add to the stock of ideas to discover truth, or a clue to it, they must leave this beaten path of medical inquiry pursued by a Sydenham, a Cullen, or a Rush. To follow up and endeavor to complete the peculiar views of such men, would only result in thinking what they have thought, or repeating what they have written. The true course to pursue (and the writer's aim) is not to provoke thought by a review of their opinions; but endeavor to trace nature in her varied workings on the animal economy.

For more than a century vigorous efforts have been made to arrive at definite conclusions on the subject of malaria. The main strength of the exertion has been to establish, by hypothetical reasoning and experiment, the existence of a specific poison. And, to judge from the diversity of views existing at the present day, we should say that success in this point is as far, if not farther distant than ever. Under such circumstances, any thought in a new vein of investigation may be looked to with peculiar interest, as tending either to retard or advance the efforts of the physician to master disease.

Malarious diseases (I use the word "malaria" in its popular or assumed sense) are observed to prevail under a variety of circumstances, but few of which are either constant or uniform. They do not seem to be proportionate to the amount of moisture in the air or earth, or to the quantity of vegetable matter in a state of decay. Were they dependent on either of them, separate or combined, then experiment and observation might measure the amount and intensity of the effects in any specified locality; but the firm believer in the hypothesis of vegetable decomposition would never have foreseen the disastrous consequences which befel the British troops in Spain, during the peninsular war, nor the uncommon prevalence of intermittents in the auriferous regions of California. The valley of the Mississippi, compared with either of them in vegetable decomposition, and, on this hypothesis, must be pronounced totally uninhabitable. I cannot conceive it necessary that the opponents of this view should prove the entire absence of vegetable matter in the soil. It is sufficient to know that it is extremely limited, and that often, in localities where it is so, malarious diseases are more frequent than in others composed almost exclusively of vegetable matter.

To the opinion that the specific poison is transmitted by the winds, there are so many difficulties attached, as to render it of little or no value in explaining these discrepancies. Even admitting the assumption, it is wholly at fault with my personal experience in California. Arriving there on the 7th of June, I proceeded immediately to the mountains, and there remained until forced to return by a most obstinate intermittent. The last rains had occurred about the beginning of April, and, at the time of my arrival, every thing presented the evidences of excessive drought. The grass and herbage of all kinds were thoroughly dried, with the exception of that along the river-borders low in the valley. The rivers, until within fifty miles of my station, were pure, cold, and swift in their course. Nor did I ever observe a marsh or pool of water within the same distance. The air was clear, pure, and exhilarating, and the winds came with great regularity from the southeast in the day, and from the northwest in the night. It was not, however, until the months of August, September, and October, that the night winds became regular and strong. The sun had scarcely disappeared below the horizon, when the tall and scattered pines began to wave in the wind. The defiles of the mountains for a time remained calm and serene, but before long the wind swept down the gorges, producing a very chilling sensation. The simple foliage of a tree was no longer either a safe or comfortable shelter for the miner, and the warmth of a fire became as grateful at night as the gentle cooling breeze from the south had been in the day. From April to November, there is a complete deprivation of any appreciable moisture—no rain, no dew, or fogs. To the medical topographist there is no feature of interest, with the exception of the great contrast between the temperature of the day and night. The habits of the miners are exceedingly simple, and they are not in general addicted to intoxicating drinks. While in the mountains, I, in common with many others who had never before suffered, was attacked with intermittent fever. From August to February of the year following, I was never free from it a week. Enlargement of the spleen, derangement of the liver and stomach supervened; and to such an extent as to compel me to abandon the country. Such a case does not form the exception but the rule. According to my observation, at least nine tenths of the diseases prevalent there are unequivocally of malarious origin. Dysentery is a very common disease, next in frequency, perhaps, to intermittent fever; and to show the intimate connection of these diseases, I may mention that I occasionally observed a most inveterate intermittent pass immediately into dysentery, the latter suddenly and permanently curing the former. Any attempt to trace these diseases to the decomposition of vegetable matter in that country must prove utterly abortive. On the one hand, there is the day wind from the wide Pacific; and, on the other, the night wind from the barren, snow-capped mountains. Besides, the unhealthy season occurs at the very period in which there is the least possible chance for vegetable decay. The months of August, September, and October are superlatively dry; but present, owing to the strong night winds, the most marked variations of temperature.

The facts adduced to controvert the hypothesis of decomposition are equally forcible against the doctrine of animalcular development. The advocates of this view closely associate vegetable growth or decay with the production of animalculæ, and whatever is conducive to the increase of the one, is also conducive to the increase of the other. It might be urged further, that the animalcular hypothesis fails to account, analogically or otherwise, for several peculiarities of the miasmatic poison. 1st. The remarkable exemption of cities, and the greater danger on the first than on the second floor of a house, receives from it no explanation. 2d. The animalculæ are said to be scattered or dissipated by the heat of the sun with day, and brought together in increased numbers and power by the shades of night. If this be so, why are not woods and shaded places more infested than the opposite? Analogical reasoning would lead to the prediction that those unknown forms of animated existence most active at night, would be the very ones most abundant and energetic in shaded situations, yet on this hypothesis we have an assumed exception of an assumed existence.

Moisture and heat combined cannot account for malarious diseases, for vessels cruising in the Gulf of Mexico, when the temperature of the air is high, and nearly saturated with vapor, are comparatively exempt. The same exemption obtains in low latitudes, however moist, provided the soil be covered with a dense foliage, or the surface with water.

Nor can heat alone account for malarious diseases, for in such a case they should advance with it *pari passu.* However, it is a well-established fact that the intensity of these diseases does increase with the temperature, and that below a certain range they cease entirely. Such an occurrence is sufficient evidence of a very intimate relation between them, and in view of this it will be well to review some of its most obvious effects on the organized world. It is doubtless true that this agent is entitled to the highest rank of vital stimulants. An illustration of this is seen in its vivifying influence on the vegetable world. The slumber or death of winter is succeeded by new energy or life from a simple increase of temperature in the spring. A high degree of heat or caloric also accelerates the growth and maturity of plants, and, some say, of animals. Familiar instances of the power of heat, and of heat alone, as a vital stimulant, are found in the simple hatching of an egg; in the revival of consciousness and motion in hibernating animals; and the development of life in the countless sperms of animated existence. Now, in most of these examples, it does appear as if heat had more influence over their lives than over that of man; but the difference is more apparent than real. The amount of heat in vegetables and the lower animals is almost wholly due to external circumstances; but in man nature provides internally means to maintain a uniform temperature, in spite of outward circumstances. This wonderful provision, particularly in man, of preserving nearly or quite the same temperature, under the most extreme conditions of heat and cold, may be applied *a fortiori* to prove that it has more influence on life in him than on vegetables or the lower animals. Indeed, the range of temperature which the latter must necessarily undergo from adverse winds, and the change from day to night, would prove immediately fatal to the human body.

When a person is exposed to a high temperature the motion of the blood is increased, the skin acts with increased energy; in short, all the actions which the undue heat excites, tend in the end to the cooling of the body. So also cold, when applied continuously or vigorously, tends to excite those functions on which depends the heat of the body. But, in detail, there is this striking difference, that while heat applied to the body either gradually, powerfully, or moderately, excites immediate actions to preserve it from change, cold, when applied gradually and insidiously, excites no such actions. In cold bathing there is generally a perceptible and healthy reaction; but when cold is applied more gradually and continuously, as in sleeping on a damp bed, or on the bare earth and open air, there is no perceptible *normal* or *healthy* reaction. The disorder or disease which almost invariably succeeds such imprudences, clearly demonstrates the potent influence of heat, and the disastrous consequences which its removal effects. In these examples it is reasonable to believe that the body, particularly if previously subjected to a high temperature, is unprepared to meet or withstand the drain upon its supply. This is borne out by the fact, that those who too suddenly remove the artificial means by which the bodily heat is preserved, are almost certain to suffer more or less ill consequences. Nature seems to speak by emphatic signs that she is not prepared to provide an immediate equivalent for the artificial means which habit has taught her to depend upon.

M. Chossat has also shown, in his experiment on animals, the power of heat on life. The true cause of death in inanition he attributes to a loss of the calorifying power. Birds, whose death seemed impending, "were almost uniformly restored from a state of insensibility, and a want of muscular power, by artificial heat. Their temperature rose, they flew about the room and took food when it was presented to them."*

Moreover, observation shows, that the portion of our species having the calorifying power in the least degree, suffer most in a variety of forms from the effects of cold. According to Copeland, more than one-half of the deaths and two-thirds of the diseases of children are caused more or less by it.

These statements lead to the conclusion that heat is among the most salutary agents on life—a point readily conceded by all; but, at the same time, it forms, according to various authors, the active cause of a variety of diseases, such as hepatic disorder, cutaneous irritation, and cerebral congestion. It is improbable that the law meets with an exception in this case. In our readiness to look to other causes of our afflictions than those for which we are individually responsible, we have laid these diseases almost solely to the change of nature; our own artificial habits, and perverse violations of nature's laws, are not taken into account. The constant effect in this age of steam is to subject the body to the greatest possible *variations* of temperature. If any physical exertion is to be performed, it is done with all possible haste, every muscle is strained, and then we fly to the coolest recesses of art to charm the body with the striking reverse of temperature. The amount of heat has but little to do with disease; it is the change which brings on the disastrous effects. Almost every case of diseased liver finds its origin in peculiar variations of temperature. If this organ be supplied with a due amount of healthy stimulus, its actions will correspond thereto. If suddenly called to perform a more active duty, it will, with care, soon become acclimated, but neither this nor any other organ ever becomes habituated to great and constant changes of function without disease, disorganization and death. Extremes in the moral world are sinful even in the most natural acts. The same is true, even more pointedly, in the physical. The great principle of moderation is the true source and secret of health in many who are very weakly constituted. But to investigate the effects of extremes, a knowledge of the comparative power of the agent is necessary. It has already been shown that heat is among the most powerful agents acting on the body. A full, cold drink of water, taken into the stomach when the body is fatigued and heated, often proves immediately fatal. Again, the sudden abstraction of heat from the lungs is the most potent and common cause of pneumonitis. The simple application of cold to, or more properly the abstraction of heat from, the feet will often check the menstrual discharge. In short, this same simple and sudden agent is acknowledged to be a fruitful source of disease. Nearly all the diseases, however, referred to this origin are those by which the effects are developed by a *sudden* cause. There is no account of this source producing disease by a periodical action. When it acts on a particular part of the body, or on predisposed constitutions, it may produce diseases totally differing from each other; but, though they thus differ, no one disputes the exciting cause; it is the same nevertheless. The point we wish to prove is, that the abstraction of heat from the body at night forms the essential cause of malarious diseases. The power of the agent abstracted, and its immediately deleterious effects no one doubts; but, in applying this explanation, the preconceived notions of malaria clash severely with it. The ingenious, well-spun, and learned hypotheses are not to be overturned by so simple an explanation. But we ask an attentive consideration of this subject, for we regard it in application as presenting by far the most plausible theory or hypothesis yet advanced.

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* Carpenter's Human Physiology, p. 685.

The power of heat as a vital stimulant being admitted prepares us to anticipate for the important effects which follow its removal, and also that these effects will be increased in proportion to the elevation of the cause. If the vital stimulant, caloric, be of a high range and long continued, then there will be a corresponding increase or intensity of effect, following its removal. In brief, and in accordance with a physiological law, the greater the stimulant, the greater the subsequent depression or reaction. Now, it is well known of malaria that it prevails very rarely under a summer temperature of 60°; and that, as advance is made towards the equator, this class of diseases assumes, *pari passu*, an intense and violent character.—Where the heat is moderate and barely able to produce the disease, the cases that occur are few and mild in their character, but in countries having a high irregular temperature the cases are of a rapid and malignant form. The cause is the same, though of so much greater intensity as to conceal in a great degree the resemblance of effects, similar in many respects to the development of a slight catarrh from a moderate degree of cold, and the development of pneumonitis or pleuritis from a high degree.

External heat, or caloric, is the essential agency; the higher the point to which it attains, the greater the sensibility and power of effect on the body, consequent on its removal. Hence, where the temperature of summer ranges about 60°, with considerable irregularities, mild forms of malarious diseases may be anticipated; and where there is a much higher summer range, with great diurnal variations, more malignant forms of malarious diseases are sure to prevail.

The *causes* of diurnal changes of temperature, particularly in the night, are due chiefly to radiation of caloric from the earth, or to the presence of winds from colder regions. In the internal region of our continent, the former is the chief, if not the sole cause, while on the sea borders, and in the neighborhood of elevated mountains, the latter is more commonly, though often an associated cause with the former. Low, moist, and loamy situations favor in a most marked manner this nocturnal depression of temperature. In fact, all know that frost may be found in such places, while others, differently situated, are considerably above the freezing point. It is for this reason that in these localities dews and fogs are always more common and abundant than elsewhere; caloric is radiated with greater facility and rapidity, causing the air to be diminished in temperature, and its capacity for moisture considerably lowered. But these effects are not observed where there is a breeze to disturb this concentration of action. It is easy to see, with this theory before us, why undisturbed conditions of the atmosphere favor—in the language of standard authors—"the condensation" of the peculiar poison, malaria, and why malarious fevers are much more common in low and marshy countries than elsewhere.

Again, where the circumstances favoring nocturnal radiation are absent, but where a great nightly reduction of temperature ensues from northeast or other cold winds, the same injurious effects follow,—a striking instance of which has already been given in the climate of California.

But besides the greater activity of the cause of malarious fevers *at night*, we must also consider the condition of the body being entirely passive during sleep; there is neither an active consciousness to a gradual abstraction of heat, nor a vigorous action in the renovating power. This view receives strength from the immunity obtained by an opposite condition of the system, as in the excitement following stimulating drinks, or the activity of the organic apparatus attendant on the digestion of food. Experience has also shown that soldiers and sailors passing from a cold country to a warmer receive great protection from flannel worn next the skin.

These general and simple reasons why the night time is particularly obnoxious to health, in malarious districts, contrasts strongly with the complicated and conflicting views of the advocates of the *peculiar poison* hypothesis, that the poison is evolved by the sun, but concentrates itself in certain spots at night; or the dews and fogs suspend, dissolve, or set free the mysterious agent, and give it entire and undiluted to the unsuspecting victim.

Allusion has already been made to the activity of malarious phenomena in certain localities; and, as this constitutes one of its most important features, a more extended notice will be warranted.

It may be stated, as a general rule, that land influences are the chief, if not the sole source of malarious fevers. Cases without number might be quoted of terrible devastations of the inhabitants of the land, while others on the water, not distant perhaps a score of miles, were enjoying good health. The intervention of a narrow stream between two localities has repeatedly been observed to separate health and disease; the most noxious effluvia of a certain spot has seemed incapable of surmounting so narrow a barrier. To suppose that the water *may* absorb the poison, is all well enough for those who believe that there *is* one to be absorbed. But to abandon such purely hypothetical views for a moment, it will be found that the effects of water compared with land are, that it moderates the heat of the day and lessens the coolness of the nights. The sea and land breezes sufficiently exemplify the general fact, together with the fogs that occur along the course of our rivers; the last are chiefly observed when the air over the water is warmer by contact with it than that of the surrounding land; and the consequence is, that as the former air is chilled by the latter, it no longer has the same capacity for moisture, and water must of necessity be set free in the form of vapor or fog. In this way it will be perceived that the chilly air of the land is neutralized to a certain extent by the warm air of the water. The reason then why bodies of water afford protection from malarious diseases is, that they are not subject to any great change of temperature from the presence or absence of the sun; and when properly situated for those residing near an unhealthy tract of country, they must and will give decided protection. Water in any considerable body acts as a moderator of temperature by the disappearance of sensible caloric through evaporation during the day, and by the slowness of its cooling during the night, thus sustaining the temperature of the ambient air. Experiments to determine the difference of land and water in the cooling process, I have not met with, but the strength of the sea and land breezes in warm maritime countries, sufficiently demonstrates that it is very great.

Certain peculiarities of land affect very materially the range of temperature through the day and night. As has been stated, moisture in a soil favors the rapid radiation of heat; the same is true of the presence of vegetable matter. Davy found that a soil rich in this ingredient enabled it to attain a higher temperature from exposure to the sun, and a lower temperature when in the shade, than a chalk soil similarly exposed. In the former the range was even 30° more than in the latter. Considering that a soil rich in vegetable mould is generally fraught with moisture, there must be a much greater range of the thermometer in one place than another; common facts show that such is the case. The first frosts and the heavy dews are always observed in the sections having the greatest abundance of vegetable matter and moisture conjoined; so there also the first cases of malarious diseases are observed to occur and continue with inexorable persistence. Their violence and malignance, however, generally depend upon the elevation of the temperature, and the length of time it continues. If the vital stimulation of heat be great and long continued, then may be expected disastrous results from its sudden fall, especially when the body is not in a condition to resist the drain upon its supply.

The physician of our rural districts must have observed, in his nocturnal rides, how much warmer the air is in a dense wood than over the open grounds. The absence of dew, as well as the indication of the thermometer, shows that the temperature does not suffer the same variations as in the open country. This is accounted for by the obstacle the sun's rays meet in reaching the earth, and the interception by the foliage of the radiation of caloric at night. The effect of course must be increased by the density of the foliage, and it must tend very materially to maintain an equilibrium between day and night. With this view before the mind, the reason why trees, and especially the pine, afford protection from malaria, is perfectly clear. A heavy vegetation will have the same preservative influence, though to a less degree, as the stratum of air between the foliage and ground is much smaller.

Another important point belonging to location is the distance of the body from the earth. Thus it has repeatedly been observed, that the lodgers on the first floor of a house suffered severely from fever, while those on the floors above entirely escaped. The explanation some of the specific-poison advocates give of this fact is, that it loves the ground. But in the theory here presented it is perfectly clear, that as the air is cooled at night chiefly by radiation, that stratum of air next to the earth must have its temperature most diminished. Experiments on this point have shown, that in the night time the temperature of the second floor of a house is from 6° to 12° higher than on the first floor. Again, it is a familiar fact that cities and towns of considerable size are comparatively exempt from malarious fevers. In this instance there is but little moisture on the paved streets. The houses retain a portion of the heat of the day; and the warm air of rooms, as well as the numerous fires for culinary purposes, all tend to sustain the temperature during the night, and prevent that marked range of heat that would otherwise take place. Napoleon, in his celebrated campaigns, frequently resorted to artificial heat to protect his troops in some noted malarious district, with complete success.

By this theory of variations of temperature, the concentrated action of malarious fevers can be easily accounted for. If there is an extensive region, favorable to great nightly reduction of temperature of the air, then the winds may waft it some distance before its temperature is raised, and thus may make those suffer who apparently ought, according to received ideas, to suffer the least. But when the causes most favorable to reduction of temperature are confined to some particular spot, then are the effects entirely local and always expected. A very small extent of country may differ very much one year from another, in the circumstances favorable to these changes of temperature. Different winds during the day; a greater abundance of moisture in the soil, combined with undisturbed conditions of the atmosphere at night, will essentially influence the healthfulness of one district more than another in the same year. But a soil rich in vegetable matter, abounding in moisture, and situated in a region having a high summer temperature, with a still atmosphere at night, cannot be otherwise than unhealthy. Let the same region, however, be covered by a dense forest, and its unhealthy character will almost disappear; not because vegetable decomposition does not go on, nor because animalculæ are not developed, but because the forest moderates the heat of the day, and sustains the temperature of the night. In truth, it is a popular fact, that forests are more favorable to vegetable decomposition, and the development of animal life, than the open country of the same region.

Assuming the existence of a poison, whether gaseous or animalcular, there is a great want of uniformity in its operation to the usual course of nature. Subject twenty men, for instance, of unequal constitutions, to the operation of a poison, either gaseous or animal, and it would be strange if *all* were not very sensibly affected by it. But in the operation of the poison—malaria—it is known that there are many who are proof against its effects. Such a discrepancy does not exist in the "temperature theory." There could be nothing more natural than that one person, from greater activity of the calorifying power, should escape unharmed, while another, differently constituted, should suffer in a most alarming manner. The question is more one of constitutional power than of ability to resist any aëriform poison.

It is said, according to Wood's *Practice of Medicine*, that in tropical latitudes the commencement of the rains is rather promotive of disease, partly, perhaps, by bringing down the miasmata from the upper air; partly by promoting "vegetable decomposition." This is scarcely consistent with a sentence or two preceding, in which the waters are said to dissolve the miasm *as it is generated*, and *prevent* its escape by *retaining* it in solution—hence the protection of floods. We will not discuss whether the poison might become exhausted after a few rains or not, but simply recall the fact, that nocturnal radiation is greatly promoted by a moist surface, and remark, that a large amount of caloric must become latent by the evaporation produced by rain falling on an arid and heated surface. This, however soon ceases, and the body adapts itself to the change. But, on the reappearance of the summer season, the contrast of temperature between day and night, must be at its height. Hence it is, that at this time malarious diseases rage with great violence.

It is well known that the negro enjoys a freedom from malarious diseases, far beyond the white. This is observed in those who are born in our own latitude. It cannot therefore arise from acclimation. The theory here advocated affords a ready explanation of it. The organization and color of the skin "possesses a very considerable influence in counteracting the heating effects of the sun's rays upon the body, and in carrying off the superabundant caloric."*

Ingenious opinions might be advanced in accordance with this theory of the periodicity which marks many forms of malarious fevers, but I withhold them and simply relate the instructive experiment of M. Brachet, who bathed "for seven successive nights, at midnight, in the river Saone, towards the close of October, when the water was cold. Retiring to bed after each bath, and covering himself warmly, he was affected by considerable reaction, which terminated in perspiration. At the end of the seventh day he omitted the practice, but was nevertheless nightly, about the same hour, attacked with a regular intermittent paroxysm, consisting of a cold, hot, and sweating stage, which returned for about a week, when it ceased spontaneously upon an occurrence which kept him out of his bed at that hour, which excited and warmed him."†

ART. VI.—*On the Saccharated Alcoholic Extract of Ipecacuanha.*

By A. G. DUNN, late Apothecary to Kings County Hospital, L. I.

THE cephælis ipecacuanha, being a most efficient remedial agent, and at the same time a very safe and mild one, has been and is still most extensively used; but, owing to numerous adulterations, the dose is rendered quite uncertain, whether given in pill, powder, or otherwise. The tincture, wine and syrup, are likewise of unequal strength, being made after many different formulæ. The chief objection to the powder, however, is its absolute insolubility, thereby causing an unpleasant mixture when prescribed with liquids.

Taking into consideration these facts, and from reading in the *American Journal of Medical Sciences*, No. xlv. p. 229, an article on various saccharine forms of medicines, we were led to attempt the preparation of a *saccharated alcoholic extract of*

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* Copeland.

† Wood.

ipecacuanha, which should be of uniform strength, perfectly soluble, and also agreeable to take. The following is the formula: ℞. Rad. ipecac. ℥iv, bruise to a coarse powder, and macerate for thirty days in f℥xvi of diluted alcohol, shaking it occasionally, then filter and express. The tincture thus formed is to be evaporated to ℥ij, with which mix sacch. albi ℥viij, then triturate in a stone mortar until it is entirely dry.

The extract, as above prepared, has the peculiar odor and taste of ipecac.; it is of a brownish-yellow color, and is soluble in water, alcohol, ether, mucilage of acaciæ, &c.; in fact, in all the solutions with which ipecac. is usually combined. The dose required to be exhibited is the same as of the genuine powdered root.

From the more agreeable taste of this article, and its complete solubility in fluids, those physicians who have tried it have given it the decided preference over every other preparation of this valuable drug; and more especially in prescribing for children, for whom its sweet taste adapts it, as an excellent form for combination with other remedies, to be given in powders.

The success attending the administration of this extract, by the physicians of Kings County Hospital (in which institution it was first prepared and brought into notice), and others of the same profession in various parts of said county, has induced us to publish this paper, in order that physicians generally may have an opportunity of testing its great superiority over the common forms of ipecac. at present in use.

455 Third Avenue, N. Y.

ART. VII.—*Cases of Membranous Croup treated in the last Stage by the Introduction of Caustic into the Larynx and Trachea.*

By EDWIN N. CHAPMAN, M. D., Brooklyn, N. Y.

CASE I.—I was called Feb. 25th, 1853, to the child of Mrs. B., No. 18, corner of Row and Furman sts., sick for three nights and two days with the croup, for which nothing had been done, the parents supposing the child had merely a "bad cold." The child was a female, fat, and robust, and two years of age.

I found the following symptoms: Shrill croupy cough; aphonia nearly complete; high fever; inspiration long, difficult, and whistling. The air appeared to be drawn through a constricted aperture with considerable muscular effort. This obstruction was permanent, and had gradually augmented in intensity since the accession of the disease.

I directed three leeches to the top of the sternum. After which a teaspoonful of the following mixture every ten minutes, till vomiting followed. ℞. Tart. antim. gr. ij; syr. ipecac., syr. senegæ, āā ℥ ss. M. This mixture failed to produce any effect. I ordered a warm bath for one hour and teaspoonful doses of syr. senegæ every ten minutes whilst the child was in the bath. This failed also to vomit it.

In the afternoon three more leeches were applied, and the first prescription given to produce vomiting, but without effect. 6 o'clock, P. M.—Fever much reduced; voice suppressed; inspiration extremely difficult, and with great muscular effort. Ordered ℞. Tart. ant., gr. i; syr. ipecac. ℥ ss.; syr. senegæ, ℥ij. M. To be given in one-half teaspoonful doses, every half hour. Also ℞. Hyd. sub. mur., gr. iv; cretæ, ppt. gr. viii; ft. chart. No. viij. One to be given every third hour.

Feb. 13, 8, *A. M.*—Mr. B. came in haste, and stated that the child was dying; it had turned black in the face, and could not recover its breath for some time, I found the child in the last, and usually fatal stage, death evidently not twelve hours distant; the child torpid; with difficulty aroused, and directing all its strength in drawing the air into the lungs. She had been in much the same condition the entire night. I saw that all hopes from ordinary treatment were over. I procured a solution of the nitrate of silver, gr. xxx to water ℥j, and introduced it into the larynx on a bit of sponge attached to a piece of whalebone. The sponge passed beyond the rima glottidis. From the spasm of the larynx it required some little effort to withdraw it. In the afternoon the caustic was reapplied. The laryngeal symptoms were equally as grave as in the morning, but without any exacerbations. About 1 o'clock that night, the child was extremely restless and oppressed for breath, when after a fit of coughing a substance was heard to come up, which was swallowed, after which the child slept comparatively quiet for several hours.

Feb. 14*th*, 8, *A. M.*—Found the child slightly improved. Since the relief experienced at 1 o'clock, the oppression had returned, and the caustic was reapplied, the sponge readily penetrating within the larynx. A piece of membrane came away on the sponge, an inch and a half long by a quarter of an inch in width, and of the thickness of a sixpenny piece. From the irritation of the caustic the child began to vomit, which, being favored by salt and water, another piece of membrane, half the size of the first, was vomited, besides an innumerable number of shreds which were floating in a white glairy substance. This was the first appearance of mucus, which was now beginning to take the place of the plastic exudation. The child was much relieved and continued to breathe with less stridula for some hours. In the evening the symptoms were again aggravated; applied a caustic solution, ʒj to ℥ij; vomited the child; mucus very tenacious, and adhesion was discharged.

Feb. 15*th.*—The child passed a more comfortable night with similar symptoms, but mitigated; applied caustic, gr. xv to ℥j; vomited the child, when it brought up a membrane two inches and a half in length; one half of which was flat, the other a solid cylinder, evidently from the bronchial tubes. From this time the membrane disappeared from the matters vomited; its place was supplied by mucus.

I am firmly convinced that the entire mucous membrane, as far as the bronchial tubes, was coated with this false membrane, when I first commenced the application of the caustic. The membrane, doubtless, has a pseudo-vitality; adheres strongly, and is nourished by the inflamed vessels of the mucous membrane. The caustic destroys this pseudo-vitality; removes the inflammation of the mucous membrane. The attachment of the false membrane being destroyed, it is coughed up as easily almost as mucus. The child gradually but perfectly recovered.

CASE II.—*Feb.* 1*st*, 1851. A child of Mr. O., Prospect-street, lately recovered from bronchitis, was attacked with croup. During the first two nights, the emetics operated with relief to the patient; on the third night they produced no effect; applied caustic as in the first case. No membrane was seen, as no steps were taken to make the child vomit after commencing the caustic. The child recovered completely from all affection of the respiratory organs; but directly as the croup began to disappear, the sublingual glands inflamed and suppurated, which so impeded deglutition, that little or no nourishment was taken. Two weeks after, all croupy symptoms had disappeared, and the child died of marasmus.

CASE III.—*Aug.*, 1853. Boy, Sackell-street, 6 years of age, had croup of 36 hours' duration; emetics operated, but produced no discharge of mucus or mitigation of symptoms. Applied caustic as before—cured.

CASE IV.—*Oct.*, 1853. Child, Smith-street, 16 months of age, had croup of 48 hours' duration. Emetics failed to operate. Applied caustic as usual. On the third day of my attendance, all croupy symptoms had disappeared; I thought recovery sure. On the fourth day, on going to see my patient, I found it breathing with great rapidity, evidently from trouble in the bronchial tubes, which was doubtless from the exudation of false membrane. The child died in the evening. No post mortem allowed.

CASE V.—*Nov.*, 1853. Child, Carroll-street, 18 months of age, croup of three nights and two days' standing; nothing had been done. This case was almost in every respect identical with that of the child of Mr. B. The treatment was the same, the probang being introduced some four inches into the trachea. False membrane was brought up on the sponge, and in the matters vomited. The child recovered perfectly.

I have thus enumerated five cases; embracing all the cases in which I have used caustic in that state, in which tracheotomy is usually considered the only resort; four of these recovered from the croup, and the fifth died from trouble in the bronchial tubes, probably the exudation of false membrane.

ART. VIII.—*On the Effects of the Milk of the Menstruating Nurse upon the Nursing Child.* By STEPHEN SMITH, M. D.

CASE.—Child, four months old. when first attacked with convulsions was well formed, very active and sprightly, in good flesh, and had never suffered from any illness whatever. The father was a stout, healthy man; but the mother was in delicate health, and decidedly phthisical: tuberculous deposits could be detected at the apex of the right lung, and she had frequently expectorated blood.

When first called to the child, it had just recovered from a fit, and to all appearance was perfectly well. I could discover, on the most careful examination, no cause whatever existing in the infant for the sudden and unexpected attack of convulsions from which it was then recovering. I then directed my attention to the mother, but could not learn that she was, or had recently been, suffering any impairment of her general health, or that she had been eating any improper food. At a loss to account for the cause of the child's difficulty, I directed it to be taken from the breast for the present, and prescribed a simple corrective of the bowels. It had several slight attacks during the next twenty-four hours, after which they ceased entirely, and the child was again put to the breast. I saw it several times during the next two or three weeks, and always found it in a good condition.

One month, however, from the first attack, I was again called to see the child, which I found just recovering from a severe convulsion. On examining its condition attentively, and although the fits were more serious than before, I failed to find any reliable cause in the child itself, and charged the mother again with being the cause of her child's sufferings. She denied, however, being in the least indisposed; and the child was once more removed from the breast, and simple remedies prescribed. The severity of the fits at once diminished, and in thirty-six hours they ceased to recur. I advised that she should nurse the child no longer, but procure a wet-nurse, or rear it by hand. Contrary to this advice, after a short interval, she again applied it to her own breast. I saw it a week or more after its recovery, and found it apparently quite well, though not as vigorous as after the previous attack.

About a month after the second attack, I was a third time summoned to visit the child. The convulsions were evidently much more severe than at any previous period; and as they had already continued nearly twelve hours, it was apparent that they would speedily prove fatal. Its general condition still continued good, although, in the interval since its last attack, it had not recovered the lost ground. The usual remedies in such cases were resorted to, but with only temporary relief. It died about twenty-four hours after the onset of the convulsions.

In conversation with the mother, she stated, that since her attention had been called to the fact that some change had taken place in the condition of her system, by which her milk had become injurious to the child, she recollected that the first attack of convulsions came on while she was menstruating for the first time after her confinement, and nearly at the close of the period. Her menstruation was always very painful, and often menorrhagic. The second attack occurred about the middle of the next period, and the third set in when she felt the first slight pains which always preceded for some time the catamenial flow.

Remarks.—There is a difference of opinion among writers as to the influence of menstruation upon the milk of the nurse. Rosen remarks that he has distinctly observed that infants, who nurse during the menstrual period, are more or less unwell. Mauriceau says, a good nurse should not have her menses. Bègin has seen a case where the milk changed its appearance, and the child became sick. Chailly advises that the nurse should not menstruate, on account of the unhealthy influence exerted upon the milk, from which the child suffers colics, &c. Many other writers might be referred to, expressing in a general way the same opinion.

On the contrary, practitioners, placed under the most favorable circumstances for correct observation, deny that menstruation exerts any peculiar influence upon the milk of the nurse. Guillot, although he advises that the menstruating nurse should be rejected, adds, that of the 25 nurses engaged in the Foundling Hospital, Paris, he has known several having their menses at the same time, but the infants in their charge did not suffer. Joux (*Schmidt's Jahrbücher*) denies positively that the milk of the menstruating nurse has any injurious effect whatever upon the child, and appeals to an experience of twenty years in proof of his assertion.

But popular prejudice, whether formed from observation or otherwise, has long since established the rule, that a good nurse does not menstruate, or at least that the child should not take the breast during this period. So prevalent is this opinion, that the nurses making application for a situation in the Foundling Hospital, Paris, carefully conceal the fact that their menses have returned. It may therefore be considered a well-settled fact that menstruation does exert some deleterious influence upon the milk of the nurse, rendering it for the time unfit for the child.

But observation here detects the existence of a noxious property in the food of the infant, which both chemistry and the microscope have as yet failed to demonstrate. Bègin, as already stated, has noticed a change in the sensible properties of the milk of the menstruating nurse, and the child fell sick. Donnè, in his *Treatise upon the Microscope*, remarks that he has examined the milk of a nurse while menstruating, but was unable to detect any appreciable modification. In one instance he found some granular bodies. The most recent examination of this subject is by MM. Vernois and Becquerel, whose investigations are contained in a small volume* recently published, and from which the opinions of different authors, as above quoted, are principally obtained. They analyzed the milk of nurses at three different periods: 1, in the interval of menstruation; 2, on the approach of the menses; and 3, during the catamenial flow. The following table gives the result:

	Interval of Menses.	Return of Menses.	Actual Presence.	Normal State.
Density	1032,24	1031,94	1031.48	1032,67
Weight of Water	889,51	886,44	881,42	889,08
" Solid Matters	110,49	113,56	118,58	110,92
" Sugar	43,88	41,68	40,49	43,64
" Casein & extractive matters	38,69	43,58	47,49	39,24
" Butter	26,54	26,98	29,15	26,66
" Salts by incineration . .	1.38	1,32	1.45	1,38

The authors call attention to the remarkable fact of the comparative regularity of the modifications, whether more or less, at these several periods, as exhibited in the table. Thus:

The *density*, being nearly normal during the interval, diminishes progressively with the approach and return of the flow.

The *weight of water* diminishes in a more marked yet regular manner, in the same order, from the interval to the actual existence of the catamenial flow.

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*Du Lait chez la Femme dans l'Etat de Santé et dans l'Etat de Maladie, &c. Paris, 1853.

The *weight of the solids* increase, in an inverse manner,—a fact deserving of attention, as it contradicts the opinions of authors.

The *sugar* diminishes progressively.

The *casein*, on the contrary, increases markedly.

The *butter* also increases, but in a more limited degree.

The *salts* diminish on the approach, but rise again, and exceed the normal amount on the return of the flow.

As the greatest change occurs at the period of the actual existence of the menstrual flow, the authors have given, in the following table, the average of the analysis of the milk of three nurses, in the two most distant periods:

	Interval of Menstruation. Average.	Presence of Menses. Average.
Density	1032,24	1031,58
Weight of Water	889,51	881.44
" Solid matters . .	110.49	118,56
" Sugar	43.88	40.49
" Casein and extractives	38.69	47,49
" Butter	26.54	29.15
" Salts by incineration	1,38	1.45

According to this table, the composition of the milk during the catamenial flow is modified as follows:

Density	diminished.
Weight of Water . .	sensibly diminished.
" Solid matters .	markedly increased.
" Sugar . .	slightly diminished.
" Casein . .	greatly increased.
" Butter . .	increased.
" Salts by incineration .	slightly increased.

The important question recurs, are these modifications of the milk of such a nature as to cause the effects observed upon nursing infants? MM. Vernois and Becquerel think that they might in an infant whose digestive organs were very delicate and susceptible to impressions; still they believe that these changes only render the milk less easy of digestion, and give rise to some accidental derangement of the functions of the intestines; and that is all.

To avoid such injurious effects, they advise that the child be allowed the breast less often, and be supplied with some sweetened water, to make up the deficiencies existing in the milk at this period. They conclude that there is only an accidental loss of proportion in the natural elements of the milk, without the introduction of any peculiar body of an injurious nature.

In a discussion which followed the reading of this paper, M. Roger stated (*Med.-Chir. Review*) that he had paid considerable attention to this subject while attached to the office of nurses, and had arrived at the following conclusions: " If the menses reappear easily, without pain or derangement of the nurse's health, while her milk is under 12 or 15 months, and the quantity of blood lost is normal and moderate, the quantity of milk does not become diminished, nor its qualities altered, and the child does not suffer from its use. If, however, the menses are too abundant or too frequent, the milk may diminish in quantity, or disappear. The same effect is also produced, though more slowly, in some days or weeks, when the menses are prolonged for a week, so that the loss is considerable. The milk will much more certainly dry up if the menses reappear at an advanced period of lactation; this being then the signal of the imperfection and approaching termination of the secretion. When the milk becomes thus diminished, it rarely exhibits the physical characters of poor milk; but by its density, whiteness, and the excess in number and size of its globules, it more approaches in character and richness cow's milk. When the menstrual epochs reappear with difficulty, and are attended with pain, indigestion, diarrhœa, &c., or are preceded or followed by leucorrhœa, the child may suffer symptoms due to indigestion, induced by the altered characters of the milk; the alteration of the milk chiefly consisting in increase in the number and size of the globules. These influences are, however, only temporary, and the milk soon recovers its normal character. The ailments which the child hence suffers are only temporary, and have been greatly exaggerated."

It is not difficult to perceive the bearing which these observations have upon the explanation of the case above related. The menstruation of the mother had always been irregular, being painful and often menorrhagic. On the occurrence of the first menstrual period subsequent to her confinement, and when at that period of the actual flow in which the greatest change in the quality of the milk takes place, the child, though entirely healthy, yet possessed of a nervous system like its mother, very susceptible to impressions, whether external or internal, after a day or two of indigestion, suddenly falls into convulsions. On being taken from the breast it gradually recovers, but not completely. One month after, it suffers a more severe attack of convulsions, the first of which occurred soon after the catamenial flow had commenced. Again taken from the breast, it recovered, but evidently was not as vigorous as before. Three months after the first attack, and when seven months old, it experienced a return of convulsions on the first accession of the pain preceding the catamenia, which speedily proved fatal.

Art. IX.—*A Contribution to our Knowledge of Poisoning by Aconite.* (Read before the Society of Statistical Medicine, New-York.) By George H. Tucker, M.D., late Assistant Physician to Kings Co. Hospital, L. I.

Cases of poisoning by aconite, as compared with other substances of the narcotico-acrid class, are of somewhat rare occurrence; nevertheless, we meet with them sufficiently often to render an accurate knowledge of the peculiar effects produced by this article, of considerable importance in a practical point of view. This infrequency may perhaps be accounted for by the fact, that its very deleterious properties are almost unknown among the laity. In proof of this, we find that in nearly every instance it has been administered or taken by mistake.

My attention has been more particularly called to the subject of poisoning by this drug, from a case having recently come under my own observation, which is given in the accompanying tables, and from the slight mention made of it by systematic writers. I was therefore led to collect as many cases of this kind as were to be found recorded in such books and periodicals as were accessible. The results of my researches are arranged in tabular form, this being much more convenient for reference, as well as deduction.

Isolated cases reported in the journals, and brief notices in the various works on poisons and medical jurisprudence, constitute, for the most part, the literature of poisoning by aconite. The only monograph on aconite, as far as I am aware, is that written by Dr. Fleming, of Edinburgh, and published in 1845. Although this work has justly been regarded as authority on the medicinal and toxicological properties of the various species of this plant, yet it by no means enters so fully into the latter as to leave unsettled very many important questions of a medical as well as medico-legal nature. We do not claim, however, in the accompanying tables to supply this desideratum, but only to contribute to this end a collection of facts heretofore widely scattered, and consequently little available, with such deductions as naturally follow their examination.

Aconite, as a poison, seems to have been known to the ancients, as it is supposed to have been mentioned by Theophrastus, and also by Ovid and Pliny. It was at that time considered the most virulent of all poisons, and was used as a State poison in the execution of criminals condemned to death. A species of it has long been known to the Chinese as a poison. It is a native of most parts of Europe, growing both in mountainous regions and on the plains. It is also indigenous in this State,* and is cultivated in gardens as an ornamental plant.

Species of the Plant.—Numerous species of the genus aconitum are described by botanists, the principal of which are the A. napellus, A. ferox, A. neomontanum, A. cammarum, A. lycoctonum, and A. anthora; the first mentioned is generally recognized as the officinal. Dr. Fleming considers it and the A. ferox as the only ones possessing any very active properties; the others, no doubt, possess similar qualities, though in a less degree.

Active Principle.—The powers of this plant are due to the presence of a vegetable alkaloid, named *aconitina,* "which is a white pulverulent substance; it is fusible, not volatile, soluble in alcohol and ether, but scarcely so in water, even when the temperature is raised to the boiling point."† It is destitute of smell, and has a bitter and acrid taste; this acrid taste, however, says Prof. J. B. Beck,‡ "does not belong to the aconitine, inasmuch as it can be separated from it by combining the base repeatedly with acids, and decomposing the salts thus formed."

Tests.—Chemistry thus far has not furnished us with any very reliable tests for this most subtle poison. On this point, Dr. Christison§ observes, "that if any of the suspected matter be obtained in a pure state, its best characteristic is its remarkable taste," to which he has found nothing exactly similar in the numerous trials he has made with other narcotico-acrid plants. Dr. Taylor remarks that nitric acid dissolves it, but the solution is colorless; when sulphuric acid is used no color is given when cold, but a dark brown tint is evolved when heat is applied. All the solutions of aconitine are precipitated by potash, and all its salts are excessively bitter.

Officinal Forms.—These are the common and saturated tinctures, and the extract. The formula of the common tincture is given in the U. S. Pharmacopœia, thus: ℞. Aconiti ℥iv, spts. vini rect. dilut. Oij, macerate for fourteen days, express and filter. The tincture recommended by Dr. Fleming is prepared as follows: ℞. Rad. aconiti napell.

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* Prof. Chas. A. Lee on Medicinal Plants of the State of New-York. *New-York Jour. of Medicine,* vol. ix.

† Taylor on Poisons.

‡ Lect. on Mat. Med. and Therapeut., p. 147.

§ Christison on Poisons, 3d Edin. Ed., p. 877.

℥xvi, alcohol f℥xvi; macerate for four days, then pack in a percolator and add alcohol until f℥xxiv are obtained. The leaves, seeds, and root, were formerly the parts used by pharmaceutists in preparing the above forms; the root, however, is now preferred, as it is supposed to contain a larger proportion of the active principle, and as being more uniform in strength.

The following analysis of the tabulated cases presents, as accurately as the meagerness of the records will admit, the results of our examination of the subject of poisoning by this plant:

Sex and Age.—Although the sex is not essential in arriving at any useful deductions, yet as it is given in many of the cases, it should not be omitted in these general conclusions. In the majority of cases males were the victims, being nearly 2 1-2 to 1; in males, also, the symptoms were often more violent, and the proportion of deaths to recoveries much greater than in females, being in the proportion of 3 1-2 to 1. It is difficult to account for this fact, as in nearly an equal number of females the dose was as large, and in many where recovery took place even larger, than that taken by males. It cannot at least be explained by a mere difference of sex.

From the too frequent omission of the reporters of cases to record the age of each patient, we shall be able to classify them only as children and adults; of these, the large majority very naturally occurred in adults, owing to the circumstances under which instances of poisoning usually take place, as in eating the leaves of the plant as a salad, and especially in making use of the preparations of the drug as a remedy. In children it occasionally happens that the tincture is given by mistake, as in case 41, which came under my own observation; and also case 49; much more often, however, children have been poisoned by plucking the leaves or flowers, or by chewing the root.

Quantity and Kind taken.—In the majority of instances poisoning was produced by eating the leaves as a salad; this is generally owing to its being gathered by mistake. In one case (14), a female, for the purpose of destroying her husband, purposely boiled the leaves with her greens, of which he ate and was fatally poisoned; a friend happening in, partook of the remainder, and suffered severely, but finally recovered. In another instance (19) a lad died from the effects of eating some of the leaves which had been given him for parsley. An infant ate the leaves and flowers, and died with tetanic convulsions in two and a quarter hours. The quantity of the different preparations taken is very various, depending entirely upon circumstances, while the effects are equally various, depending wholly upon the real strength of the preparation taken. In this latter respect the marked looseness observed by writers in noting accurately the preparation used, whether the common, or saturated tincture, or the infusion, that it is quite impossible to arrive at anything like accuracy as to the actual amount of the poisonous principle of the drug taken in each individual instance. This will account for the great discrepancy observed in regard to the fatality of different doses; for instance, one man took twenty-five minims of the tincture with twenty minims of the tincture of belladonna, and one dram of the tincture of musk (case 40), and died with symptoms of poisoning by aconite; another swallowed an ounce and a half of the tincture prepared according to the Parisian codex, and survived. This difference observed in the effects of the various, and often of the same preparation, may be farther explained by the fact stated by Pareira, that the aconitina is so strongly retained in the vegetable tissues after their compression, that a variable quantity of the alkaloid is obtained in the same process. In but one instance was the aconitina taken (37); in this case two and a half grains were swallowed by mistake; and, although not seen by the physician until eight hours subsequently, the patient recovered. He manifested symptoms of hydrophobia, and suffered a complete collapse. A remarkable instance of administering the fresh juice in a hospital to twelve patients (cases 23 to 34 inclusive) afflicted with scorbutis, by mistake for cochlearia, is recorded by Ballardini. Each patient took about two and a half ounces of the juice; nine recovered and three died. The symptoms were very nearly alike in all; two old women, both of whom died, suffered convulsions, and finally paralysis.

Symptoms.—The earliest symptoms occur from the local effect of the poison, viz., tingling, pricking, burning or benumbing sensation in the lips, tongue, and mouth; this often extends immediately to the extremities, and is felt in the skin in different parts of the body, and also along the œsophagus and in the stomach. In case 13 this order seems to have been reversed, the first symptoms commencing in the extremities, and subsequently extending to the tongue and mouth.

Vomiting generally succeeds to the burning in the throat and stomach; it is usually violent, but more often diminishes in severity after the free expulsion of the contents of the stomach, unless promoted by emetics; it may, however, persist until death, and be spasmodic in its character. Vomiting may be absent, and even nausea, in fatal cases; but more often recovery takes place in such instances. This difference of effects upon the stomach seems to depend upon the quantity and form of the preparation taken; where a large quantity of the tincture was swallowed, the vomiting was violent, and continued, probably, from its local irritant effect; but in other instances, when taken in small and repeated doses (case 46), its first action seems to have been upon the nervous system, causing great prostration, with no symptoms referable to the stomach. The matters ejected are noticed as being green, livid, and bilious; in no instance was stercoraceous vomiting observed. Dr. Fleming denies that aconite is an irritant poison; but, from the promptness with which vomiting follows the introduction of the alkaloid (case 37) into the stomach, and the congested state of the mucous membrane often found after death in fatal cases of poisoning, we should be disposed to favor its irritant action.

Purging is a common symptom, often severe, and attended with violent, colicky pains, tenderness of the epigastrium and belly, and sense of distension of the abdomen. In some instances purging was probably due to the remedies employed, but in others it seems to have followed as the direct effect of the poison. Occasionally a diarrhœa set in, with painful sensations of the bowels.

Nervous System.—Among the early symptoms are those due to the action of the poison on the nervous system; these are tingling in various parts of the body, loss of sensation, tremors, cramps, great muscular debility, prostration, restlessness, sense of swelling of tongue, and constriction of œsophagus, hurried and laborious respiration, and, progressively, convulsions, tetanic and hydrophobic symptoms, &c. In several cases it resulted in general paralysis, and in one in paralysis of the lower extremities. Dr. Christison was led by experiments to conclude "that the symptoms depend in a great measure on gradually increasing paralysis of the muscles, which terminates in immobility of the chest and diaphragm, and consequent asphyxia." This analysis would seem to sustain this opinion. The intellect was generally clear, occasionally vivid; delirium was seldom present, and then noticed as merely incoherent. In two cases (1, 42), however, the patients were described as furious and mad. Orfila regards monkshood as acting peculiarly upon the brain, causing delirium; in this opinion he is not sustained by statistics.

Circulatory System.—The pulse is generally frequent, weak, and often imperceptible when noticed; in a very few cases it was slow and irregular. The impulse of the heart is noticed in several cases as having been weak and fluttering.

Pupil.—The action of aconite was observed in 17 cut of 20 cases to cause dilation of the pupil. That this appearance was due to the effects of the poison we must infer from the fact, that it was among the earliest symptoms noticed. This is contrary to the views of the best authorities. Dimness of vision was occasionally remarked.

Treatment.—Where the patient was seen early, emetics of zinc, ipecacuanha, tartar emetic, &c., were usually administered, with demulcent drinks. These remedies are, as in all cases of poisoning with drugs, of great service in the early stage. The subsequent treatment has usually been stimulants, such as ammonia, alcoholic drinks, artificial heat, sinapisms, &c., owing to the great tendency to collapse. The results of this course have been usually successful, and it must be regarded as the rational method of treatment in the absence of any antidote. Among the departures from this practice, we may notice the internal use of iodine—case 35; but although the patient recovered, it was probably due to the free use of emetics, followed by stimulants in a later stage. In case 37, the patient could not swallow, owing to hydrophobic symptoms, and anodynes and nourishment were accordingly administered by the rectum, with a favorable result. In one case, a strong infusion of huaco (*Eupatorium huaco*) was administered, which allayed the vomiting, when reaction came on, and the patient recovered.

Results.—In the plurality of instances, poisoning by aconite does not prove fatal. In the fatal cases, death may take place in an hour or be delayed till the sixth day; in the great majority of cases, however, the poison proves fatal within three hours from the time that it was taken.

Post-mortem Appearances.—Of the 25 fatal cases, the results of autopsical examinations, are given in only 11. Of these, general venous congestion was most commonly present. In 5 cases the vessels of the brain were found gorged with dark blood; in all in which the juice was taken, the pia mater was noticed to be highly injected with a great amount of serous effusion under the arachnoid, and at the base of the brain, but none in the ventricles. The lungs were generally congested, and, in cases 2, 3, and 4, they are recorded as being dense, hard, and engorged. The heart is noticed in but one case, and in this the cavities of the right side were filled with dark blood, corresponding with the same condition of the lungs. The mucous membrane of the stomach is generally congested, either universally, or, which is much more often, in patches, the degree varying from mere points to a high inflammatory blush, or even a brown color. It is occasionally found empty, and in 3 cases it was distended with gas. The small intestines were observed to be in the same condition as the stomach when noted. The color is not mentioned. The rectum was found intensely injected in 3 cases, in all of which a similar condition of the œsophagus was observed.

Sex.	Age.	Quantity and kind taken.	Symptoms.
M. 1.	Ad.	Ate some fresh leaves in a salad.	Reported as dying mad.
2. 3. 4. 5. (?) 6.		Tincture of the root.	Burning from throat to stomach; colic; tenderness of belly; sense of swelling of tongue and face; vomiting and purging.
7. M. M. 8.	Ad. Ad.	℥iij of root given each for capital punishment.	Experienced most violent pains.
M. 9.	Ad.	Do.	In a few hours became an idiot; face covered with cold sweat; total loss of sensation; spasms; syncope; involuntary stools; spasms; vomiting of livid matter; body swelled.
M. 10.	Ad.	Do.	
M. 11.	Ad.	Ate of fresh leaves in a salad.	Immediately felt burning heat in tongue and gums, and soon after in whole body, accompanied with twitchings. Two hours after, eyes and jaws fixed; extremities and forehead bathed in cold sweat; no pulse perceptible; respiration short.
F. 12.	Ad.	Ate small portion of root.	Slight vomiting came on shortly after eating, with severe pain in abdomen.
F. 13.	Ad.	Mouthful of tincture of the root.	In five minutes, prickling and tingling in arms and fingers; painful sensations across wrists; then in tongue and mouth; then in legs and feet; in less than ten minutes, face and throat felt swollen; nausea and retchings; legs failed; almost blind; conscious; eyes fixed and protruded; trunk and extremities cold; wrists pulseless; pupils contracted; countenance livid; jaws and fauces rigid; resp. short, imperfect, and labored; heart fluttered feebly.
M. 14.	40	Ate the fresh plant boiled in greens.	Vomited first the leaves eaten, then bilious matter; face alternately pale and red; tingling of flesh and tongue; restlessness; purging; occasional incoherence; lockjaw; frothing at mouth and nose; clenched hands.

Progress and Treatment.	Result.	Post-mortem Appearances.	Authorities.
	Died in a short time.		Mr. Willis. *Med.-Chir. Rev.* July, 1837.
	Died in 2 hours. Died in 2 hours. Died in 2 hours. Recovered. Recovered.	Stomach and small bowels very red; gullet and rectum red; lungs dense, hard and gorged; cerebral vessels turgid.	M. Pallas. *Christison*, 4th Edin. ed., p. 875.
Appropriate means were used.	Recovered. Recovered		Matthiolus. *Beck's Med. Jurisp.*, 1838. Vol. 2, p. 636.
Became apoplectic.	Died.		Ibid.
	Died.		Ibid.
One pint of ol. olivæ and infus. card. benedicti given, which induced emesis; also, ammonia carb., and again vomiting ensued, with purging; pulse interrupted and irregular.	Gradually recovered.		Mr. Bacon. *Philos. Trans.* Vol. 38, p. 287.
Emetics and stomach pump.	Died in 3 hours.		Dr. Taylor. *Med.Jurisp.*Am. ed. 1853, p. 163.
An emetic was administered, which produced vomiting; convulsions at each attempt to swallow; five hours after taking poison, pulse 58, full and intermitted; pupils larger.	Recovered.		Mr. Sherwen. *London Lancet*, March 25, 1837, p. 13.
Not seen by a medical man; no treatment.	Died in 3 hours.	24 hours after death: abdomen swollen; stomach empty and covered with yellowish gray mucus; irregular brown patches in mucous membrane of stomach. No other parts examined.	Dr. Geoghegan. *Dublin Jour. of Medicine.* July 1, 1841, p. 403.

Sex.	Age.	Quantity and kind taken.	Symptoms.
M. 15.	Ad.	Ate small portion of the above (case 14).	Two minutes after, prickling, numbness, and burning heat in mouth, throat, and stomach; copious flow of saliva; surface cold and sweating; burning in gullet and stomach; face felt swollen; no sense of constriction about the neck; restlessness; vision dim; stupor and insensibility.
M. 16.	57.	All ate of the roots in a salad; the man eating one and a half roots, the woman half a root.	Soon after eating: burning and numbness of lips, mouth and throat; violent and constant vomiting; extremities cold; chest warm; head cold and sweating; eyes glaring; violent pains in head; excessive trembling; lips blue; mind not disordered; not delirious or sleepy.
F. 17.	57.		Tingling and numbness of lips, mouth and throat to stomach; violent vomiting; numbness of extremities; lost power of articulation; great muscular debility; unable to stand or walk; stiffness of limbs.
F. 18.	5.		Similarly affected, but more slightly, except evinced slight tendency to sleep; like the other two, it was constantly putting its hands to its throat.
M. 19.	14.	Ate leaves in mistake for parsley, (prob. A. neomontanum.)	Two hours after: burning and tingling in mouth, throat, and stomach; very sick, and soon after had a fit.
20.	Ad.	Five grains of fresh extract.	Quarter hour after: tremors in muscles of thighs and arms; prickling in various parts; great irritation in throat, followed by severe vomiting; convulsions; during their accession became unconscious; when they ceased, speech was restored, but sight confused; surface cold and sweating; pulse slow and irregular; respiration short and hurried; beat of heart interrupted.
21.	Ad.	Do.	Do.
22.	Ad.	Do.	Do.

Progress and Treatment.	Result.	Post-mortem Appearances.	Authorities.
One hour after: hands and jaws clenched; speechless and frothing at mouth and nose. At midnight: purging and vomiting; cramps; tenderness of epigastrium; syncope.	Able to be about in 3 days, and perfectly recovered in five weeks.		Dr. Geoghegan.
Quite conscious till 2 minutes before death; no cramps, spasms, or convulsions; very weak, but no loss of control over voluntary muscles; able to walk; emetics given; ol. ricini, pedeluvia, rum and water; vomited more or less till ½ hr. of death, (probably owing some to emetic.)	Died in a fainting state after a stool.		Dr. Pareira. *Mat. Med.*, 3d Am. ed. 1854, Vol. 2, p. 1088.
No cramps, spasms, or convulsions; sight dim; hearing unaffected; very giddy; face and throat insensible to touch; no delirium or sleepiness; most part conscious: body and extremities cold. Treatment as above; reaction in five hours.	Recovered.		Dr. Pareira.
Treatment same.	Recovered.		Dr. Pareira.
His mother gave him a glass of whisky; no other treatment.	Died in 7 hours by asphyxia.	Vessels of brain enormously distended with dark fluid blood; stomach empty, with deep inflammatory blush over whole internal surface; a few patches of darker color also noticed. No further examination.	Mr. Ramsay. *Northern Jour. of Med.*, June, 1844.
Heat and sinapisms to extremities; counter irritation to spine and precordial region; ammonia in strong decoction of huaco.	Died in 3 hours.		M. M. Pareyra. and Perrin. *Buchner's Report, für die Pharm.*, No. 68, p. 199; and *Med-Chir. Rev.*, Oct. 1839, p. 544.
Same treatment.	Recovered.		Ibid.
Do.	Recovered.		Ibid.

Sex.	Age.	Quantity and kind taken.	Symptoms.
23.	Ad.	Each took about two ounces and six drachms of fresh juice in mistake for cochlearia.	Restlessness: great prostration of physical and mental energies: face pale and expression altered; pupils dilated: distressing headache and vertigo; pain and tension in abdomen; vomited green matter: in a fever: diarrhœa; anxiety and oppression at chest; trunk and extremities cold; livid color of nails: cramps in legs; pulse small, feeble, and often imperceptible.
24.	Ad.		
25.	Ad.		
26.	Ad.		
27.	Ad.		
28.	Ad.		
29.	Ad.		
30.	Ad.		
31.	Ad.		
M. 32.	60.	Do.	Similar symptoms, with dyspnœa, vomiting, and greater anxiety.
F. 33.	55.	Do.	Were convulsed; great prostration of strength; and at length paralytic.
F. 34.	55.	Do.	Do.
M. 35.	Ad.	Took 40 grains (f℥iss) of tinct., prepared of equal parts of plant and alcohol, infused for three months.	Immediately: burning and sense of constriction in throat and along œsophagus; restless; intellect entire; lower limbs in constant motion; in 2 hrs. convulsions; lower limbs drawn backwards; thumb thrown in palm of hand; face cold and sweating; eyes turned up; nearly pulseless; convulsions lasting 3 minutes, when they ceased; the senses were entire except he was totally blind.
M. 36.	39.	Six fresh plants cut up and boiled in half pint beer to $\frac{1}{4}$; half of this he swallowed.	One hour after: found quite insensible; pupils widely dilated; lower extremities paralyzed; pulse scarcely perceptible; great nausea; foaming at mouth; throwing arms about.
M. 37.		Ate of the root by mistake for horseradish.	Soon felt tingling of lips, extending round neck; dimness of vision.

Progress and Treatment.	Result.	Post-mortem Appearances.	Authorities.
Emetics; stimulants inwardly, and warm spirituous embrocations to surface.	All recovered.		M. Ballardini. *Annali Univers. di Med.* 1840, Tom. 3, p. 635; and *Med-Chir. Rev.* April, 1841, p. 499.
Do.	Death in a few hours.	Vessels of pia mater highly injected; serous effusion under arachnoid and at base of brain; no effusion in ventricles; lungs congested; stomach distended with gas, and containing some gray-colored liquid; patches of vascular injection in stomach and small intestines; liver and spleen healthy.	M. Ballardini.
Do.	Died in 2 hours.	Same lesions observed.	M. Ballardini.
Do.	Died in 2 hours.	Do.	M. Ballardini.
Fifteen centigrammes of tart. emetic with ipecac; this produced vomiting; in 2 hours, another emetic given; frequent convulsions; shiverings; head thrown strongly backwards; resp. stertorous; intellect unimpaired; sinapisms used and solut. idodini given; stimuli.	In 3 days was able to leave his room.		M. Devay. *Lond. and Edin. Monthly Jour.*, April, 1844, p. 356, quoted from *Canstatt's Jahresbericht.*
A teaspoonful of brandy given; this revived him; then stomach-pump applied.	Died while using the pump.	48 hours after death: liver, kidneys, and spleen distended with dark blood; veins generally congested; stomach presented red blush near cardiac extremity; bowels filled with air; pelvic viscera healthy.	Mr. Sayle. *Med. Times,* Oct. 18, 1854, p. 70.
Brandy; mustard emetic.	Died.		*Med. Times and Gazette,* Nov. 19, 1853.

Sex.	Age.	Quantity and kind taken.	Symptoms.
M. 38.	Ad.	Two and half grs. Aconitina.	Early and copious vomiting 8 hrs. after; collapse; surface cold and sweating; face pale; pulse hardly felt; pupils acting to light; no paralysis of sensation or motion; intellect perfect and even vivid; repeated violent spasmodic vomiting; hydrophobic symptoms when attempting to swallow.
F. 39.	27.	Fifteen minims of strong tinct. of root.	Immediately: numbness in tongue; dysphagia; convulsive twitchings of facial muscles; inability to walk; complete unconsciousness for 2 hours; pupils slightly contracted; symptoms paroxysmal.
F. 40.	25.	Tablespoonful of saturated tincture.	One hour after: pupils dilated, though sensible to light; pulse frequent, soft and weak, occasionally nearly imperceptible; sense of fulness in limbs; numbness, and prickling in tongue, throat, and over general surface; no nausea; head clear.
M. 41.	Ad.	Took draught containing Tr. Aconiti ♏xxv, Tr. Belladon. ♏xx, Tr. Musk f℥j.	Walked a mile after taking it; tingling of hands and feet, which were benumbed and powerless; in 1¼ hrs. vomited freely; speech thick; staggered, as if drunk; no stupor or loss of consciousness; 2 hrs. after taking dose, weakness in arms and legs; no peculiarity in state of pupils; pulse 110; face pale.
M. 42.	16.	Nearly teaspoonful of saturated tincture.	Soon after, tingling, &c., in lips, tongue, extending to throat; syncope soon followed by copious vomiting; restlessness; spasmodic contractions and relaxations of muscles of upper and lower extremities; surface cold and sweating.
M. 43.	Ad.	One ounce of tincture of root.	Sense of burning in throat and stomach; inexpressible anguish; vomiting and purging; tenderness of epigastrium; colic; afterwards delirium, manifested by loud cries and running about in a violent manner.
M. 44.	Ad.	Do.	Soon began to stagger; then was seized with violent vomiting, purging, and acute colic pains.

Progress and Treatment.	Result.	Post-mortem Appearances.	Authorities.
Hot bath; sinapisms; enema of ol. terebinth; pulse feeble; dysphagia; enemata of beef tea and tinct. opii.	Recovered.		DR. G. BIRD. *Lond. Med. Gazette*, June 6, 1848, p. 30.
Internal and external stimuli used freely; next day had numbness in both arms.	Recovered in 24 hours.		DR. TOPHAM. *London Lancet*, July 19, 1851, p. 56.
An emetic of zinci sulph. and ipecac., by which Oj of thick fluid was ejected; in 1½ hrs. pulse 120, feeble and irreg. in force; 3 hrs. after, no dil. of pupil, but numbness and tingling remained.	Next day perfectly well.		DR. MACREADY. *Am. Jour. Med. Sciences*, Jan., 1852, p. 268.
An emetic given; alcoholic stimuli; vomited again; convulsive movements; face more deadly pale; cold and clammy perspiration.	Died in 3 hours.	Veins of brain much congested; serous effusion in great quantity under arachnoid; lungs gorged with dark blood; right cavities of heart filled with the same; mucous membrane of stomach of dark red color; other viscera healthy.	DR. EASTON. *Glasgow Med. Journal*, July, 1853, p. 189.
In 1 hr. great prostration of strength, pulse 120, very feeble; countenance pale; pupils much dilated; slight headache; consciousness perfect, but mind occasionally wandered; resp. short and labored; gave brandy, carb. ammonia, &c., sinapisms and artificial heat.	Recovered in 8 hours.		DR. TUCKER. March, 1852.
Emetics and emollient drinks.	Recovered in 2 days.		M. DEGLAND. *Jour. de Chemie Méd.*, tom. 3, p. 344, quoted in *Am. Jour. Med. Science*, April, 1827, p. 471.
Do.	Died in 2 hours.	Only appearances of note, were great redness of mucous membrane of stomach and small intestines.	M. DEGLAND.

Sex.	Age.	Quantity and kind taken.	Symptoms.
F. 45.	Ad.	One ounce of tinct. of root.	Sense of swelling and burning in tongue, extending along œsophagus to stomach; soon after, shivering, swelling of face, vomiting, purging, and violent colic.
46.	Infant.	Ate leaves and flowers of the plant.	Shortly after began to stagger, as if tipsy; then pain in abdomen.
M. 47.	66.	Eighty drops of tincture of root in ten doses over a period of four days; largest dose at one time ten drops.	After using the drug four days, was found with extremities cold; skin cold and sweating; pulse 130, quick and feeble; cramps in legs, and spasmodic pains in abdomen; head somewhat confused; slight diarrhœa for few days previously.
M. 48.	56.	Ate of root.	
M. 49.	7.	Do.	
M. 50.	14.	Tablespoonful of tincture of root.	In 5 minutes, uneasy sensation in abdomen; in 20 minutes face pale; pulse 80, regular and full; pupils slightly dilated; intellect clear, and remained so till death; muscular movements impaired; head felt heavy and full; sight and hearing unaffected; frequent retching; no vomiting until after emetic; at first copious, afterwards frequent and violent, but became gradually less; pain in œsophagus and stomach; first after vomiting, great prostration.
F. 51.	Ad.	Tablespoonful of saturated tincture.	[Had been using the tincture externally for a few days previously for neuralgia.]
52. F.	Ad.	Teaspoonful of saturated tincture.	15 minutes, retching and burning pain in stomach; some hours, vomited freely after an emetic; skin cold; pulse 100, feeble and regular; spasms of of fingers; frequent convulsions; mind clear all through.
F. 53.	Ad.	ʒj Fleming's tincture.	

Progress and Treatment.	Result.	Post-mortem Appearances.	Authorities.
Emetics and emollient drinks.	Died in 2½ hours in state of great agitation.	Only apperances of note were great redness of mucous membrane of stomach and small intestines.	M. DEGLAND.
In 2 hours an emetic given; immediately the eyes became convulsed; trismus; trunk bent rigidly backwards; limbs convulsed.	Death ensued in 2¼ hours.		*Jour. de Chem. Méd.*, 1840, p. 94, quoted by *Christison*, 4th Edin. ed., p. 875.
Mild aperients; camphor; ammonia; next day torpid, and could scarcely be roused; intellect very clear; no paralysis.	Died in 6 days from first dose.	24 hours after death: blood unusually fluid; no other morbid appearances.	*Prov. Med. and Surg. Jour.*, Aug. 20, 1845, p. 535.
Had convulsions previous to death.	Died in 1¼ hours.		DR. GEOGHEGAN. *Dublin Jour. of Med.*, July 1, 1851, p. 409.
	Died in 2 hours.		Idem.
Zinci sulph. ʒj; ice water douche to head; sinapisms, &c.; pulse 45 and regular; extremities cold; vision very dim; jactitation; no numbness except in head; used stimuli; reaction; in 1½ hours again collapsed; rigidity of muscles of back and neck.	Died in 2 hours.	No autopsy made.	DR. GRAY. *N. Y. Jour. of Medicine.* Nov., 1848, p. 336.
	Death rapidly ensued.		DR. HARTSHORNE. *Taylor's Med. Jurisp.*, 1853, p. 163.
Ipecac.; frictions to surface; sinapisms, &c.; stimuli; 3 hours after, pain in throat and thorax; constant retching; resp. irregular and spasmodic; pulse 120, feeble and intermittent; pupils dilated; tr. opii often repeated; after this, rapid recovery.	Next day well.		DR. PUTMAN. *Am. Jour. Med. Sci.*, July, 1853, p. 69.
	Died in 5 hours.		*Med. Times and Gaz.*, Jan. 1853.

The following is an analytical summary of the fifty-three cases of poisoning by aconite, reported in the preceding table:

Sex.—Males, 24; females, 12; sex not given, 17.

Age.—Adults, 47; children, 6.

Quantity and Kind Taken.—ʒiij of root taken by 4, all males, of whom 2 recovered and 2 died; root in substance, one and a half, 1, a male, died; half a root, 1, a female, recovered; very small piece of root, 2, both females, 1 recovered, 1 died; root, quantity not given, 3, both males, died; leaves, quantity not mentioned, 6, all males, 3 recovered, 3 died; leaves and flowers, 1, an infant, died; f℥ijss of fresh juice, 12, recovered 9, and 1 male and 2 females died; tablespoonful of saturated tincture, 2, both females, 1 recovered, 1 died; tablespoonful of tincture of root, 1, a male, died; mouthful of tincture, 1, a female, recovered; ♏xv of strong tincture, 1, a female, recovered; f℥iss of tincture (Parisian Codex), 1, a male, recovered; f℥j of tincture of root, 3, males 2—recovered 1—died 1, female 1, died; ♏xxv of tincture ♏xx of tincture belladonna, and fʒj tincture of musk, 1, a male, died; teaspoonful of saturated tincture, 2, both recovered; tincture of root, dose not specified, 5, recovered 2, died 3; f℥ij of decoction, 1, a male, died; grs. v of fresh extract, 3, recovered 2, died 1; grs. ijss of aconitina, 1, a male, recovered; gtt. lxxx of tincture, in ten doses, 1, a male, died, ℥i Flem's tr. 1, died.

Symptoms.—Appeared immediately in 3, all recovered; shortly after in 10, 5 recovered, 5 died; in quarter hour, 4, 3 recovered, 1 died; in two hours after, in 1, died; no time given in 34; tingling, prickling or burning sensation occurred in 24; not mentioned in 27; vomiting in 38; early in 20; not until emetics were given in 5; no emesis except produced by emetics, 8; vomiting violent in 11; copious in 4; slight in 1; matters ejected were green, livid, and bilious, in 13; no nausea in 1; diarrhœa in a few, purging in 12; pupils dilated in 18—early in 15, late in 3, contracted in 2, both early; natural in 1, its condition not stated in 31; restlessness in 16; surface cold and sweating in 30; respiration short, hurried and labored in 20, stertorous in 1, not noticed in 31; severe pains in abdomen, 19; copious flow of saliva in 1; dysphagia in 3; inability to walk in 3, vision dim in 5, totally blind in 1, almost blind in 1; intellect entire in 12, stupor or unconsciousness in 5, not mentioned in 35; paralysis in 3; no paralysis of sensation or motion in 1, others not stated; idiotic, 1; apoplectic, 1; speechless, 1; difficulty of articulation, 1; speech thick, 1; staggering in 2; convulsions general in 7; trismus in 4; twitchings of facial muscles, 1; excessive trembling in 1; tremors in 3; cramps in 14; shivering in 2; great weakness in 15; headache and vertigo, 14—slight in 1, violent in 13; delirium in 4, slight in 2, violent in 2; occasional incoherence in 2; no delirium or sleepiness in 2; others not noted; pulse frequent, weak, and often imperceptible in 16, slow and irregular in 4, not mentioned in 32; lips blue in 2; countenance livid in 1; nails livid in 12; foaming at mouth in 2; sense of swelling of tongue or face, 13; of limbs, 1; hands clenched 2; syncope in 3; tenderness of epigastrium in 7; eyes glaring and protruded, 1, fixed in 1.

Result.—Recovered, 27; males, 9; females, 6; sex not given, 12. Died, 25; males, 14; females, 5; sex not stated, 5;—of these there died in one and a quarter hours, 1, a male; in two and a quarter hours, 1; in two and a half hours, 1, a female; in two hours, 8—males, 2, females, 2—sex not given, 4; in three hours, 4, males, 2, females, 1; no sex given, 1; in seven hours, 1, a male; in six days, 1, a male; in a short time, 2—1 male, 1 female; in a few hours, 1, a male; no time specified, 4, all males, five hours, 1, female.

Post-mortem appearances.—Lungs congested in 7; vessels of brain gorged in 5; mucous membrane of stomach red in 6; patches of darker color on its surface in 5; intestines injected in patches or otherwise in 6; rectum and œsophagus very red in 3; vessels of pia mater highly injected in 3; serous effusion under arachnoid in 4; at base of brain in 3; abdomen swollen in 2; bowels filled with air in 2; stomach empty in 2; containing gray-colored liquid in very small quantity in 3; filled with gas in 3; right side of heart filled with dark blood in 1; liver, spleen, and kidneys engorged in 1; healthy in 1; blood unusually fluid in 1.

Art. X.—*On the probable Cause of the Bruit, heard over the Heart in Acute Rheumatism.* By Ezra P. Bennett, M. D., Ct.

I am led from close and repeated observation to believe that in cases of acute rheumatism, the heart is not as often or as seriously implicated as many practitioners of the present day are inclined to believe. It is a fact not to be denied, that in a great majority of the cases of acute rheumatism, a bruit, more or less distinct, is plainly and distinctly to be heard. The question is, What produces it? It is generally conceded, I believe, that it depends upon some structural change in the valves, either thickening of the valves from inflammation or fibrinous deposits upon their free surfaces. That such causes of endocardial murmurs do often exist is but too true. But that they always exist where these sounds are heard, or that they are the only cause of such sounds, I do most strenuously deny. In fact I do not believe that in the great majority of these cases there is any structural change in the valves whatever, or any deposits upon their surfaces. I believe the sounds in most of these cases depend entirely upon a change in the circulating fluid itself. We all know that in acute rheumatism, more than in any other disease, the plasticity and density of the blood is increased by the increased quantity of fibrin which it contains. Now this increased density and plasticity of the circulatory fluid must of course produce a decidedly increased friction upon the endocardial surface, and upon the valves, and in this way produce this endocardial murmur, in the same manner that an effusion of lymph, between the pericardium and the surface of the heart, produces the friction sound which we so plainly hear in pericarditis. Both these sounds, in my opinion, are produced in the same way, that is, by friction; one upon the internal surface of the heart, the other on the external. I have been led to adopt these views, in the first place, from noticing the little disturbance which takes place in the circulating system, during the existence of these complaints; and, secondly, from observing how quickly these sounds disappear, when the inflammatory state of the system is subdued, and the blood defibrinated, by proper remedies, which could not possibly be the case if these lesions actually existed. We know that a change of consistency in the circulating fluid does produce anæmic murmurs without any structural changes. Then why not in other diseases? The change in the blood in anæmia, though not identical with that in rheumatism, is, after all, analogous. In one fibrin is actually increased, in the other relatively so. In both cases the blood is more plastic, and the friction greater, and therefore both states of the blood are capable of producing endocardial friction sounds. My object, in this short communication, is to call attention to this view, which others may perhaps already entertain.

PART SECOND.

CRITICAL ANALYSIS.

ART. XI.—*Transactions of the American Medical Association*, Vol. VI., Philadelphia, 1853. 8vo, pp. 869.

THE TRANSACTIONS of our great national Association augment in interest and value each year. The present volume yields abundant proof of the fact that medical observation and research have been prosecuted with as much vigor and ability during the past as during any former year of our Society's history. It is a professional document of which every American physician may be proud; and we are gratified to learn from two or three sources that this annual issue is becoming better and more generally appreciated, as evidenced by an increased effort on the part of members and of Societies represented in the Association to secure for it a wider distribution.

The first article which we are led to notice is the Address of the retiring President, Dr. Beverly R. Wellford, of Virginia.

He, in the first place, notices the origin of the Association, the necessity for its formation and the objects aimed at in it, and then alludes to the proposed modification in the plan of organization, and urges "great caution in the introduction of material changes."

After alluding to the influence of the Association in exciting Federal and State Legislatures to healthy action on the subject of vital statistics, and of the importation of spurious drugs and medicines, and the direct good yielded to its members by its published transactions, he thus eloquently notices the charge made by some that the Association has as yet accomplished nothing, and has even injured the profession in the estimation of the public by exposing its errors:

> Is it also nothing, by unaided, intrinsic moral power, to have bound in one code of medical ethics thousands of men in every section of this wide Union—each one free to act according to his own individual views, but yielding them in cheerful obedience to the

opinions of the Association, with as much deference and submission as if it were armed with the power and the terrors of penal law? Is it nothing, unendowed with compulsory authority of legal enactment or the seductive influence of the mileage and per-diem pay, annually to convoke such an assembly as I now have the honor to address? Such a congress, of such materials, and under such circumstances, presents a spectacle of moral beauty to which the opponents of medical reform cannot be insensible. It must command their respect and admiration, even if it fail to secure their coöperation. I know not, gentlemen, what may be the effect on others of an occasion like this; but, for my single self, when I thus recognize the denizen of the city and the forest—him of the frozen North and of the sunny South—him of the mountains, the rivers, and the prairies of the West, with him from the borders of the broad Atlantic, bringing their various opinions and prejudices, and casting them together as a sacrificial offering on the altar of science and professional patrotism,—when I see them animated by the same honorable and lofty impulse, and in fraternal harmony uniting their efforts to attain the same grand results,—I feel an honest pride in my profession and my country, and an abiding confidence that to such sons the high destinies of both may be safely entrusted.

Some plans for professional improvement and benefit are then indicated, and the Address closes with an eloquent tribute to the memory of Drake and Horner.

Report of the Committee on Medical Education.—This is, in the main, an excellent and able report; yet a few of its conclusions are to be taken with some grains of allowance. After giving a résumé of the opinions of former committees who have reported on the subject, the Chairman, Dr. Z. Pitcher, who is the author of the Report, proceeds to speak of the influence of the Association in elevating the standard of office and college education, and particularly enters into the desired improvements in medical colleges. He is a strong advocate (as by his relations to the University of Michigan we should expect him to be) of "free colleges for the preparatory and professional education of young men." He illustrates the feasibility of the project by giving a synopsis of the organization of the University of Michigan. Of the main features of that plan we approve. We demur strongly, however, to one inducement, which it is proposed to offer to students, and that is, the deduction of one year from the term of medical study of all students who first graduate in the department of the Arts.

It is true that those who have acquired the mental discipline, afforded by the literary course, may be able to receive and digest as much medical knowledge in two years as the undisciplined could in three; yet it must be conceded, by every reflecting member of our profession, that, even with a good preliminary education, and a diligent pursuit of medical study for three years, the student graduates with only a general comprehension of the leading departments of professional knowledge, while the important and practical details connected with forensic medicine, physical diagnosis, the extensive subject of hygiene, the special investigations of particular classes of disease, as those of the eye, skin, and sexual organs, besides a wide range of other subjects, are yet to be learned.

While, therefore, it may be proper to incite the pupil to suitable disciplinary preparation, we regard the inducement of a shortened term of medical study as mischievous in the extreme. The time is not distant when four or five years will be regarded as a period too short, in which to master the important subjects included in our professional curriculum, whatever may have been the preliminary education.

The author of the report very briefly but ably discusses the importance of a sound preliminary education, and particularly urges attention to the classics, mental philosophy, botany, zoölogy, meteorology, and geology.

The reporter objects to the sentiments expressed by former committees, by whom it has been proposed not to increase the number of schools so situated, as not to give the pupils the benefit of hospital practice. He would extend the hand of fellowship to all schools who teach the ordinary course, but would restrict them in conferring degrees of a higher grade than Bachelor of Medicine, leaving the advancement of the pupil in higher attainments, and the conferring of higher degrees, to that class of institutions "having their seat in the great commercial cities," contiguous to hospitals.

He discusses with some severity, mingled with not a little justice, the common methods of hospital and clinical instruction. He looks for little improvement except in those who are the private pupils of a hospital, or who observe at the bedside of the patient of the general practitioner.

He would reconstruct our hospital organization, and adapt it to the wants of the time. This could be done by erecting them into schools of practice, with a special faculty, whose plan of instruction should have a direct relation to the cases in their wards, so that each should become an illustration of the text of the professor.

The committee, in closing their report, submit the following resolutions:

1. *Resolved*, That the Association reaffirm its formerly expressed opinions on the value and importance of a general education to the

student and practitioner of medicine, and that it would gladly enlarge its rule on this subject, so as to include the humanities of the schools, and the natural sciences.

2. *Resolved*, That, in the opinion of this Association, a familiar knowledge of the elements of medical knowledge should precede clinical instruction.

3. *Resolved*, That in order to accomplish the latter, the hospitals, when they shall be elevated to the rank of schools of practice, and the intelligent private preceptor, are the most effectual instrumentalities to be employed.

Report of the Committee on Medical Literature, by N. S. DAVIS, M. D., of Chicago, Illinois. The first portion of this report is devoted to a consideration of the medical periodicals issued during the year under review. The whole number published was 28, viz., 4 quarterlies, 6 bi-monthlies, 15 monthlies, 2 semi-monthlies, and 1 weekly. This is the greatest number issued in any single country except Germany. Prof. Davis is led to believe that a decided improvement has taken place in the original department of our Medical Journals during the last two years, much of which he would attribute to the influence of the Association. Still he finds just reason of complaint that so much is crude and imperfect, serving merely to fill a certain space in journals, and afford the author an opportunity to see his name in print. The review department of our Medical Journals, with but few exceptions, the reporter characterizes as "meagre and unsatisfactory in the extreme." While we admit the truth of this remark, we are hardly disposed to censure the medical journalists of our country—whose readers desire rather a *coup-d'œil* of each new book than an elaborate review of the subject—for not giving more than an analytical examination of new works as they appear. It must be reserved to quarterlies, or journals especially devoted to reviews, to enter upon an extended and critical analysis of each new publication, and present the existing state of our knowledge of the subjects on which it treats.

The reporter proceeds to notice some of the leading papers which have appeared in the transactions of State Societies and local organizations; the monographs and books which appeared during the year, with brief notices of their contents and character; and concludes with some very judicious remarks upon "the *means* that are best calculated to elevate the character and foster the growth of a medical literature truly national or American." The defects in our medical writings are referred to four primary sources, viz.: 1. Deficiency of preliminary education; 2. The absence of a clear and definite perception of the fundamental principles of physiology and pathology; 3. Defective modes of investigation, and 4. Too much haste in the preparation of matter for the press. The writer proceeds to remark upon these several heads with much force and truth, and concludes that "our great reliance, therefore, must be on the creation of such a sentiment throughout the profession as will not only restrain individual members from encouraging uneducated young men to enter the ranks of the profession, but as will also develop a nobler idea of what a physician should be, and with it an appetite for a purer, more philosophical and comprehensive, professional literature." The means of effecting this desirable reform he believes to be, the faculties of the medical colleges, the conductors of medical periodicals, and the active members of national, State, and local organizations. We cannot too much commend this portion of Prof. Davis' report; it is ably drawn up, and replete with suggestions of the highest interest to our common profession. Appended to the paper is a tabular statement of all the issues of the medical press of this country, for the year included in the report.

On the Agency of the Refrigeration produced by Upward Radiation of Heat, as an Exciting Cause of Disease, by G. EMERSON, M. D., of Philadelphia.—The object of this report is to show, that diseases usually attributed to exposure to the night air, the influence of the moon, &c., are due to the reduction of the temperature of the body by the upward radiation of heat. The law on which depends the deposition of dew—the condensation of the moisture of the atmosphere by the refrigeration of terrestrial bodies from upward radiation in the absence of the sun—was first discovered by Dr. Wells, a native of Charleston, S. C. We can recall no series of experiments more beautifully illustrative of the process of inductive reasoning than those prosecuted to so brilliant a termination by this philosopher in his garden in London, where he had taken up his residence. After explaining the nature of terrestrial radiation, and pointing out some of its ordinary effects, Dr. Emerson proceeds to show "how this rapid means of inducing refrigeration may become active in the production of disease." By having a proper covering, armies have been known to encamp in malarious localities without any ill consequences; such facts are to be explained by the known law that the interposition of any substances, even a passing cloud, between the object and the clear night sky, diminishes the upward radiation, and consequently prevents refrigeration. For this reason, an umbrella is a protection from cold by night, quite as much as from the heat of the sun (solar radiation) by day. To this refrigeration from terrestrial radiation, or some other physical principle, are due all those evil consequences following an exposure to night air, which have from the earliest ages been ascribed to lunar and astral influences. The committee conclude with the hope that the brief exposition of this fruitful source of disease, which they have been able to give, will lead to more general observation upon this subject, and the application of the simple means of protection which suitable covering affords.*

On the Results of Surgical Operations in Malignant Diseases, by S. D. Gross, M. D., of Louisville, Ky.—In entering upon the duties of his appointment, Dr. Gross made great exertions to obtain, from prominent American physicians and surgeons, the results of their experience on the subject of his report; but with a success by no means commensurate with the importance of the question to be considered. Although thus left to his own resources, the author has produced a paper of great value on one of the most difficult and unsettled questions in modern surgery. In regard to the results of the surgical treatment of cancer, it is impossible at present to do more than approximate the truth, and arrive at conclusions susceptible of material modification in the progress of medical science; this approximation Dr. Gross has made, by exhibiting concisely, and with great research, the present state of our knowledge of the subject of his report. The first division of the report is devoted to *General Observations.* 1. Nature, objects, and difficulties of the inquiry. 2. Origin of malignant disease. 3. Hereditary nature of malignant diseases. 4. Latency of malignant diseases. 5. Circumstances contra-indicating surgical interference. 6. Reproductive tendency of malignant diseases, after operation. 7. General rules respecting the manner of conducting excision of malignant diseases. 8. Treatment after operation.

The second division embraces *General Observations on Cancer, in relation to the results of surgical operations.* I. Contribution of Dr. J. M. Warren, of Boston, consisting of, 1. Some operations for the removal of cancer, from which the patient still survives. 2. Others in which the disease, having been removed, has returned after a number of years, and again been subjected to the knife with relief. 3. Others which are interesting from their peculiarity. 4. The statistics of cancer, from the Mass. General Hospital. 5. Cases from public and private practice, the details of which are incomplete. II. Contributions of Professor Hamilton, of Buffalo, consisting of 59 cases of operation for the removal of cancer from various portions of the body, all carefully and very accurately arranged in tables. III. Facts and observations contributed by different surgeons, and gleaned from American and European authors.

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* See Art. V. of the present number of this Journal for an ingenious examination of refrigeration as a cause of malarious diseases.

The third division considers *Cancer of particular Organs, in relation to the 'results of surgical operations. Cancer of the breast* contains an elaborate examination of the opinions of authors on the treatment of cancer in this situation, from the time of Hippocrates to the present. In the subsequent sections of this division, the author treats of cancer of the eye, gums and jaws, lips, penis, testicle, uterus, anus and rectum, and bones. In this portion of the report, he enters upon a most laborious examination of the medical literature of different countries, and introduces a mass of medical opinion and statistical tables, derived from various sources, which seem to exhaust the subject. The conclusions of the author have, for the most part, already been published; there are some points of interest which he regards as still unsettled, that have not yet appeared, and which we extract:

First. Excision is of doubtful propriety in all cases in which the disease is of hereditary origin, or where it occurs in several members of the same family.

Second. It is doubtful whether an operation should be performed when the patient is very young, and the disease is of rapid growth. There is reason to believe that surgical interference, in such a case, will only expedite the fatal result, which is generally inevitable.

Third. It is problematical whether an operation should be performed when the disease is attended by suppression of the menses, or by great irregularity of this discharge.

Fourth. Not a few surgeons regard a resort to the knife as of questionable efficacy when there is a quickened state of the pulse, occasioned by the local irritation.

Fifth. There appears to be no general agreement among surgeons as to whether extirpation is proper when there are two or more coexistent and accessible cancerous tumors.

Sixth. It is supposed, but the fact is not established, that excision of carcinomatous tumors only tends to hasten the patient's death.

Seventh. It is doubtful whether, as has been asserted by different surgeons, the prospect of a permanent cure is greater, all other things being equal, after an operation on an old cancer, than after an operation on a cancer of recent standing.

Eighth. It has been stated by writers of great respectability, among others by Dr. Macfarlane, of Glasgow, that, in robust women of sanguine temperament, the reappearance of cancerous disease, and its subsequent progress, are more rapid after operation than in nervous or lymphatic persons; an assumption demanding verification.

Ninth. It requires to be proved whether excision ought to be performed in the ulcerated stage of malignant disease, as a means of prolonging life, and of procuring comparative relief from suffering.

Report on the Epidemics of Tennessee and Kentucky, by W. L. Sutton, M. D.—This was the only Report on Epidemics made to the Association, of the eight committees appointed for this purpose. It is, in some measure, a continuation of the Report made last year. It opens with the topography of certain counties, and the meteorological observations made in different localities; these facts the Committee very properly consider the basis of a correct report. The reporter then proceeds to consider the several diseases which have prevailed in his district. Cholera appeared at Memphis, Tenn., and Paris, Ky.; in the former place it occurred in the early part of summer, and was thought to be due to the miasmatic location of the town. At Paris, cold salt-water was taken internally, and freely applied to the surface with satisfactory results; at Memphis, all methods of treatment failed Hooping-cough was rife in a few places, and was treated by Dr. McNelley, of Fayetteville, Tenn., in eight cases, with the free use of nitric acid drinks, with marked success. Measles prevailed in several localities, and at Memphis was quite fatal, principally from pneumonic complications. Dr. Ramsey, one of the Committee, concludes from his observations that this disease has no definite period of incubation. The furunculus epidemic occurred at Memphis during the summer of 1851 and 1852. Cholera infantum is common, in certain localities, every summer, while others are almost entirely free from it. The interesting papers on this disease, which appeared in the medical journals of Tennessee, by Dr. W. T. Baskette and Dr. T. M. Woodsen, are analyzed by the Committee. Diarrhœa and dysentery prevailed in many districts during the summer, the latter of which was quite malignant. The different methods adopted in the treatment of these affections are given in detail, and are of much interest. Fevers depending upon malaria prevailed to a considerable extent in the latter months of the year. We shall only notice the account of an *Anomalous fever*, which prevailed at Memphis, Tenn., late in the fall of 1852. It is given by Dr. Grant, who furnished to the Committee a report of the diseases of that city. He says:

> The attack in most of the cases was not preceded by any marked indisposition. Chilly sensations, or a well-marked cold stage, of short duration, ushered in the disease. The reaction which followed was attended by intense heat of the surface; eyes more or less injected; circumscribed flushing of the cheeks; pain in the back; headache; pulse ranging in different cases from 90 to 120 beats in the minute, and continuing throughout the entire course of the attack feeble and unresisting;

the tongue at the commencement showed little evidence of departure from a normal appearance, but soon began to exhibit a line of dry and elevated papillæ, extending back along its centre, which continued to widen, of a dark brown color, exhibiting a notable contrast with the more or less smooth and red tip and ridges of that organ. The thirst for cold drinks was intense. There was tenderness on pressure over the epigastrium. Nausea and frequent vomiting of pale-green fluids were troublesome symptoms. The bowels were not moved, except by medicine, when the dejections were quite fluid at first, and of a pale-green color. The urinary secretion was small in quantity, and highly colored, giving off a strong ammoniacal odor. Hemorrhage from the nose was common; in a few it occurred both from the nose and bowels; and in one case blood flowed from these, and likewise from the uterus, in considerable quantity, two weeks after the last menstrual period. Sleeplessness and jactitation were absent in no instance. Little or no delirium present; intellect clear. No eruptions discoverable. Great prostration of the vital powers present in all. The duration of the fever was from five to fifteen days, most of the cases being convalescent during the first week. It had, like those called continued, its morning periods of partial remission, but they were not the clearly marked remissions of the paroxysmal fevers prevailing at the time.

The gastro-intestinal mucous membrane, which was exempt from implication in the intermittent fevers, was now the part most seriously involved. The remedy found most serviceable was mercury carried to ptyalism. Quinia answered no useful purpose in controlling the disease. Hemorrhages from the bowels seem to have been common, and also beneficial, as no death occurred in these cases. The reporter adds that no cases of relapse were known. Typhoid fever appeared to be epidemic in some districts, but it presented no unusual symptoms, and seems not to have been very fatal. The report concludes with some remarks upon the mortality by phthisis in Memphis, a malarious district, which proves not only that a southern climate is not protective against consumption, but that this disease is equally fatal in a miasmatic region.

On Acute and Chronic Diseases of the Neck of the Uterus, by C. D. Meigs, M. D., of Philadelphia.—The report of Dr. Meigs is entirely clinical in its character, and consists of a running commentary on some of the more common forms of the diseases of the cervix uteri. It aims to be practical rather than original, and, with the aid of an extensive series of illustrations, it will serve the practitioner a good purpose by enabling him to comprehend a class of obscure diseases. As this essay is announced as being published in a separate form, we shall reserve any further remark for the present.

An Inquiry into the Nature of Typhoidal Fevers, based upon a con-

sideration of their History and Pathology, by HENRY F. CAMPBELL, M. D., of Georgia.—In this inquiry, Dr. Campbell bases his theory upon rational induction and disclaims any reliance upon facts or cases of typhoid or typhus fever observed by himself. He gives as his reason for such a course, that "it is obvious to our own mind that any views of disease founded mainly upon rational induction, would be less liable to fallacy when based on the recorded careful observations of others, than when they are merely the interpretation of our own cases." With this explanation, he enters upon the inquiry in the capacity of an analyst. The first part of the report is devoted to a careful and minute analysis of the symptoms of typhoidal fevers, as observed in the *nervous, circulatory, and digestive systems*, and examines attentively all our authorities upon this subject. We have not space to follow the talented author in this investigation, and will only remark that, although we differ with him materially in his deductions, yet we regard his paper as one of the best reviews of present authorities on fever with which we are acquainted. The following will give the reader an idea of the author's peculiar views, as the result of this examination:

> Starting with what he considered the rational assumption that the pathology of typhoidal fevers is in the ganglionic system of nerves, we have compared their characteristics and phenomena with, first, the *normal* action of this portion of the nervous system; then, with the known and well-established results of *experimental irritation and action* of various portions of these nerves, and we have found that the analogy is sufficiently close to admit the legitimate inference that the symptoms and pathological lesions of typhoid and typhus fever are produced by a normal action in certain portions of this system of nerves. First, because no typhoid or typhus phenomenon ever occurs, except in regions supplied by this system; secondly, because the peculiar phenomena of these diseases occur in a more marked degree in those parts more abundantly supplied from this source; and thirdly, because the nature of these symptoms are always found more purely and characteristically typhoid in those portions of the organism supplied exclusively by this kind of innervation. And further, on the one hand we are forced to admit the truth of these impressions, because we have hitherto a legitimate and consonant combination of theories, to our own mind, as competent to the full and rational explanation of *all* the phenomena of the disease as the one now offered.

However we may dissent from these opinions, the author's practical deductions are worthy of commendation. These are, to avoid all depressing measures, or such as are calculated to exhaust the nervous energies; and, on the contrary, to resort to sustaining treatment. The plan of Dr. Percival of resorting to cold affusions, especially in children, he would rationally expect to be highly beneficial, from the known effects of cold water thus applied in improving the nervous centres. He would be led also to favor the use of quinia in large doses, as recommended by Dr. Dundas, and also a resort to *strychnine* in small doses, "with the view of waking up and restoring the diminished energy of innervation, upon which the impaired function depends, in the same manner that we would advise it in other similar cases, where the cerebro-spinal system was implicated."

On Coxalgia, or Hip-Disease, by ALDEN MARCH, M.D., of Albany, N. Y.—Spontaneous luxation, as an occasional accident in hip-joint disease, is the universal opinion of surgical writers. Although this view is not always based upon post-mortem examinations, but seems to be transmitted from one author to another, yet it does not want the demonstrative evidence of actual dissection. It is true, however, that this accident is very often supposed to exist, when the appearances which lead to such diagnosis are due to other causes; in such instances the precise pathological changes which have taken place in the joint are not appreciated.

Upon the examination of the bony specimens of the hip-joint of persons who had died while laboring under a severe form of hip-disease, Dr. March was brought to the conclusion that all the signs usually relied on during life, as diagnostic of an idiopathic dislocation, could be explained by the organic changes in the form and relations of the head of the femur and acetabulum. Impressed with the importance of this idea, the writer has personally examined about forty pathological museums in this country and Europe, and, with paper and pencil in hand, made records of all the morbid specimens of hip-joint, whether wet or dry, amounting to about two hundred. It is not a little interesting to note the fact, that after this patient and laborious examination, extending over seven or eight years, of the actual condition in which the disease left the hip-joint in such a great number of instances, and a most searching analysis of surgical authorities, Dr. March takes the position "that *spontaneous dislocation* of the hip (*as purely the result of morbid action unaided by superadded violence*) *seldom or never takes place.*" We do not perceive that he has made any decided advance upon former writers, for he admits the possibility of the dislocation, and contends only that it is very rare, and is often falsely diagnosticated to exist. Much, however, has been gained by this pathological research and sifting of authorities, in making our knowledge of this troublesome disease more exact.

The second part of Dr. March's essay is entirely distinct from the first. In this he discusses the propriety of extension and counter-extension in the treatment of hip-disease, in an advanced stage, when the surfaces of the joint are covered with organized or organizable matter, a method which he considers peculiar to himself. The great object of this treatment is, by keeping the joint surfaces quiet and in slight apposition, to promote anchylosis. To effect this object, a modification of Physick's long splint is employed, having an opening over the great trochanter to avoid undue pressure at this point. If deformity already exists, Dr. March gives ether, and forcibly brings the limb into its proper position, and at once applies the splint. But two cases are given illustrating this mode of treatment. The method of treating inflamed joints by perfect rest is entirely correct, analogically considered, but we doubt much its practicability when applied to hip-disease. In these cases the disease is not so much local as constitutional, and while rest for the former is of the first importance in its cure, active out-door exercise is the *sine qua non* of the latter. It is very questionable, therefore, if, in his efforts to relieve this formidable *symptom* of a constitutional disease, the practitioner might not be led to employ the means most directly tending to destroy the general health of the patient, and of course defeat his main object.

On the Surgical Treatment of Morbid Growths within the Larynx, by Gurdon Buck, M. D., of New-York.—The basis of this paper is the history of a case of polypus of the larynx which came under the writer's observation. The symptoms were those ordinarily present in this affection, and, as the whole subject was critically examined in a former number of this journal (Vol. viii, N. S., p. 15), we need not pause to detail them. The case derives its chief interest from the several efforts made to remove the morbid growths by external incision, after the plan of Ehrmann, and its final termination in gangrene of the larynx. The first operation revealed to the surgeon the fact that the largest of these growths, instead of being pedicillated, the form most favorable for excision, was sessile. The efforts to remove the latter were unavailing, owing to the deep situation of the larynx, the patient being fleshy, and the height to which the attachments of these growths extended. A few were snipped away, the trachea-tube introduced by removing a portion of the two upper rings of the trachea, and the patient allowed to rest. On the following day the attempt to complete the operation was renewed, but with no better success than on the day before; several portions of the tumor were removed with scissors, and the acid nitrate of mercury applied to the remainder. Fearing to continue the application of the caustic to surfaces already highly inflamed, the operator determined to make another effort to reach the tumor by extending the incision farther upwards. This operation was, however, postponed indefinitely, owing to the existing swelling and inflammation, and the wound allowed to heal around the tracheal tube. The condition of the patient at first much improved, gradually grew worse, and, in about four months from the first operation, a second was performed in the manner already described, by extending the incision upwards so as to expose the larynx in its whole extent and the os hyoides. It was now discovered that the largest tumor was of a flattened form, closely attached on either side to the ventricles, and spread forward over the base of the epiglottis. The rima was so much contracted by them that the little finger could only be made to enter it from below with considerable pressure, while the forefinger, passed into the mouth, now detected the tumor at the orifice of the larynx. It being found impossible to remove the growth entirely, portions were excised sufficient to allow a free passage through the rima, and the wound closed after properly adjusting the tube. The patient recovered favorably from this operation, but signs of a return of the disease were soon manifested, and in about three months a third operation was undertaken, not however for the purpose of destroying the growths, but to introduce the tube lower in the trachea. From this time the case steadily progressed to a fatal termination; deglutition became more and more difficult; expectoration of what was supposed to be an arytenoid cartilage occurred; and, finally, a bloody discharge from the throat, which assumed a gangrenous odor. She died six months after the last operation, suffocated from the failure in the attempt to introduce the tube which the patient had removed at night. The autopsy revealed extensive gangrene of the larynx, with contraction of the œsophagus. Examined by the microscope, these growths were found to be epithelial. A colored lithographic illustration of the morbid parts accompanies the paper.

Although this operation failed to give permanent relief to the patient, owing to the nature of the attachments of the morbid growths, yet we cannot consider it less creditable to this skilful surgeon, nor unworthy of the praise awarded to Ehrmann's more successful case by Stromeyer, who declared it one of the most brilliant achievements of modern surgery. Had the tumor been pedunculated, which is the most usual form, there is little doubt of the entire success of the operation. It is not to be denied that the attempts to treat this disease by external incision have, except in the instance already alluded to, failed in giving more than temporary relief, but they have generally been undertaken either in entire ignorance of the cause of the dyspnœa, or at the latest and most unfavorable period in the progress of the case.

Dr. Buck advises the insertion of the tracheal tube when suffocative dyspnœa comes on, and if the patient will consent, the subsequent laying open of the cavity of the larynx, with a view to the extirpation of the tumor. If it is found impossible to remove the morbid growth, he would thoroughly cauterize it with the acid nitrate of mercury before closing the wound, and afterwards treat it by the application of the dilute acid nitrate, or a strong solution of nitrate of silver repeated by the mouth.

Appended to this case is a résumé of the subject of polypus of the larynx, and tables in which the published cases, 42 in all, are carefully arranged. Dr. Buck gives to Dr. Green, of this city, the credit of directing the attention of the profession in this country to this subject, by his treatise on the surgical treatment of polypi of the larynx. This is an error, not in letter, but in spirit. The *first* paper published in this country on polypus of the larynx was by Prof. Parker, of this city, (*New-York Jour. of Med.*, N. S., Vol. viii.,) in which two cases, both occurring in his own practice, were reported with figured illustrations, one of which is the first case of true pedunculated polypus of the larynx recorded in our home medical literature. In this paper, also, were reproduced the material portions of Prof. Ehrmann's monograph, and several other cases were added, of which Dr. Buck has very properly availed himself in the preparation of his valuable tables.

On the Sympathetic Nerve in Reflex Phenomena, by HENRY F. CAMPBELL, M. D., of Georgia.—The design of this short article is to establish the precedence of the writer's enunciation of the doctrine of a reflex relation existing between the cerebro-spinal and ganglionic system of nerves, recently put forth by M. Bernard. The views of Dr. Campbell are contained in a paper on the Influence of Dentition in Producing Disease, published in the *Southern Medical and Surgical Journal*, in 1850. The author certainly establishes his claim to priority of publication, as far as regards Bernard's article referred to in the *Gazette Médicale;* but, if we are not mistaken, similar views have been advanced at a still earlier date. As he does not, however, pretend to priority over all others, but only so far as his information extends, we will not be to the trouble of examining the subject farther.

Prize Essays.—The last two articles in the volume are the prize essays. For the first time since the organization of the society, two voluntary communications were deemed worthy of its prizes. Without disparagement of preceding efforts of this kind, we may justly rank these essays among the most important contributions to medical science which the prize-awards of the association have yet elicited.

The first of these essays is *On the Surgical Treatment of Certain Fibrous Tumors of the Uterus*, by Washington L. Atlee, M. D., of Philadelphia. The class of tumors discussed in this paper have hitherto been considered beyond the resources of art, and in its preparation the author has relied entirely upon his own experience. He classifies these growths as follows: 1. Extra-uterine, or surface tumors. 2. Intra-uterine, or cavity tumors. 3. Intra-mural tumors of the uterus. Dr. Atlee gives the diagnostic marks of each of these classes of tumors, and carefully points out the sources of error in diagnosis. In each instance the uterine sound affords much assistance, as with this the relation of the tumor to the cavity and walls of the uterus may be discovered. The author is led from his own experience to believe that these tumors do occasionally undergo the cancerous degeneration; but he admits that the scirrho-cancerous tumors may have been mistaken in their early stages for fibrous tumors. Operations for the relief of these tumors must be undertaken before softening and degeneration takes place. This condition is marked, in the extra-uterine and intra-mural, by the occurrence of paroxysms of acute pain, soreness to the touch, formation of cysts containing liquid on the surface, failure of the general health and strength, emaciation, anasarca and ascites, and the peculiar straw-colored aspect of the skin characteristic of malignant disease. The intra-uterine tumor has, in addition to these symptoms, a sanious fetid discharge; it assumes a brownish, grayish, or black color, and its lower portion softens. Under these circumstances an operation is of doubtful propriety; a fact of considerable importance in the treatment of these tumors in their low degree of vitality, although they may have a highly vascular pedicle and membrane covering them. For this reason, if a section is made through their investing membrane, it may be followed by the death of the whole mass, owing perhaps to the admission of atmospheric air.

Another fact of great importance is contained in the following proposition: "*That the excessive hemorrhages which sometimes occur arise not from the uterus itself, but from the vessels of the membrane which cover the tumors.*" The author supposes these floodings are due to a rupture of the veins of the covering membrane, which become congested by the growth of the tumor, and the muscular action of the uterus impeding the circulation of the veins, while the arteries still continue their supply. The true method of procedure, and that which has in the author's experience "invariably arrested hemorrhage instantaneously," is thus given: "*During hemorrhage, to pass the bistoury along the vagina into the cavity of the uterus, and make a very free incision into the most exposed portion of the tumor.*" Too much value cannot be attached to this suggestion, if the experience of others shall confirm the correctness of the author's practice.

Dr. Atlee proceeds to relate minutely the histories of 14 cases, in which he has operated for the removal of the class of fibrous tumors above noticed. The operation consists in introducing the knife into the cavity of the womb, and incising the attachments of the tumor, if intra-uterine, or cutting freely into its substance, if intra-mural, and endeavoring to enucleate it with the finger. To facilitate this operation, ergot is given freely some days previously, in order to bring down the tumor and dilate the os. The result of this operation, in the 14 cases recorded, are, 8 recovered; 5 died; 1 under treatment. Of those which died, 1 had pneumonia; 1 anæmia; 1 erysipelas and peritonitis, following gastrotomy, and during a subsequent effort to remove the tumor through the vagina; 1 disease of the heart; 1 peritonitis, the tumor proving to be malignant. In the case under treatment, the author had some doubts as to the nature of the tumor.

The operation of Dr. Atlee is certainly very ingeniously conceived, and seems to have been very dextrously executed; of its practicability, the results thus far given are flattering, especially in the cases of non-malignant, intra-uterine, and intra-mural tumors. In these exceptional cases, where the tumor proves to be malignant, such surgical interference may be productive of great harm. Although, to avoid this contingency, so unfavorable to an operation, Dr. Atlee assumes that the fibrous tumor does not degenerate, yet he is compelled to admit that the scirrho-cancerous tumor may be mistaken for the fibrous, an error into which his own recorded cases show that he has fallen.

The second prize essay is on *The Cell; its Physiology, Pathology, and Philosophy, as deduced from Original Investigations; to which is added its History and Criticism*, by WALDO J. BURNETT, M. D., of Boston. This essay was written in the latter part of 1851, to which time the author has endeavored to trace the physiological, pathological, and philosophical history of the cell. It is obvious, however, that the history and criticism of a science, undergoing such annual modifications as that of microscopical physiology and pathology, written two years since, must necessarily be very imperfect. This deficiency Dr. Burnett has attempted to supply by inserting new matter as the sheets were going through the press. The essay displays the author's usual research, and is a valuable contribution to our knowledge of the cell. We notice some points open to criticism, but as they are not worthy of notice without a much more critical examination of the whole subject than we are at present inclined to enter upon, we shall defer for the present any further remarks. C. G.

ART. XII.—*On the Etiology, Pathology, and Treatment of Fibro-Bronchitis and Rheumatic Pneumonia.* By THOMAS H. BUCKLER, M.D., formerly Physician to the Baltimore Almshouse Infirmary. Philadelphia: Blanchard and Lea, 1853. 8vo, pp. 150.

THIS is an exceedingly interesting and well-written dissertation upon a subject of very great importance; and it is manifestly the production of a mind well trained to close and scientific observation. The author evidently belongs to that class of physicians who cultivate mental independence as a cardinal excellence; and although we could wish that he had made more extensive and searching investigations, bearing on the special pathological events and relations of the peculiar forms of disease he describes, we are confident that the testimony of all intelligent physicians will confirm the opinion that he has brought forward and elucidated a subject hitherto almost entirely overlooked, yet of the greatest practical importance.

Dr. Buckler modestly presents this little volume as the fruit of gleaning in an old field, from which rich harvests have already been gathered; and we think that the ample results of the gleaning are not particularly flattering to the pretensions of many recent writers on Bronchitis. Though pulmonary engorgement, broncho-pneumonia, and pleuro-pneumonia, have always been recognized as frequent and very grave complications of acute rheumatism, probably few physicians have learned to distinguish the special form of bronchitis described by Dr. Buckler as dependent primarily upon the rheumatic diathesis, and having its election in the fibrous tissues of the pulmonary structures. That such a special variety of inflammation of the fibrous portion of the pulmonary tissues may occur, would certainly be a legitimate inference from what is known concerning rheumatic inflammation of the fibrous tissues generally. The occurrence of a severe and dangerous form of general pulmonary inflammation as a frequent event in cases of acute articular rheumatism, has been faithfully observed by Latham,* Taylor,† Fuller,‡ and other recent writers. Dr. Latham remarks that "such forms of pulmonary inflammation are portentous ingredients in the clinical history of acute rheumatism, and give a fearful interest to it. * * * In four instances of *bronchitist, he affection was no mere catarrh*, but an inflammation largely diffused through both lungs, producing deep oppression and dyspœna." Out of 136 cases of acute rheumatism, at St. Bartholomew's, Dr. Latham reports 24 cases of pulmonary inflammation. Out of 246 cases of acute rheumatism reported by Dr. Fuller, of St. George's Hospital, 41, or exactly 1 in every 6, were complicated by some form of pulmonary inflammation. These figures will probably be found to correspond very nearly with the observations of most physicians on this point. But the question now arises, does rheumatic inflammation of the fibrous structure of the lungs often, or ever occur as an idiopathic and simple disease dependent solely upon the rheumatic diathesis, yet without any other or general manifestation of rheumatism? Dr. Buckler entertains no doubt upon this point, for in only nine out of twenty-seven of his cases of fibrous bronchitis had the individuals suffered any form of rheumatism previously, while in seventeen of these cases the bronchitis preceded all other manifestations of disease. There was more or less endocardial murmur in eleven cases, pleuritis supervened in five, and pericarditis was observed in four. Five of the individuals suffered on different occasions with rheumatic inflammation of the sclerotic tunic of the eyes; but only two of these ever labored under articular or general rheumatism. The author remarks, that "it is, therefore, probable that persons prone to rheumatic sclerotitis, are also peculiarly subject to fibrous inflammation of the bronchi."

In a large proportion of our author's cases, it appears that there was no other manifestation of rheumatic inflammation than the bronchitis; and in but few was there any general manifestation of rheumatism. It is stated that most of the cases occurred from exposure of the body to wet or dampness at a low temperature.

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* Latham's Clinical Medicine.

† Dr. John Taylor, of Huddersfield, in 'Med.-Chir. Trans.,' vol. xxviii, p. 514.

‡ Dr. Fuller, Rheumatism, Rheumatic Gout, &c., p. 307, et seq.

The Symptoms.—The following are mentioned as the most important:—

"*The symptoms most strikingly characteristic of the acute variety of rheumatic bronchitis are, profuse, irregular sweats, inordinate sensibility to cold, transient flushings of the face, and either a constant or a paroxysmal and unproductive cough.*"

"There is usually no fixed pain or soreness about the chest, but both are sometimes felt during the act of coughing." "The auscultatory signs, with the exception of an occasional sibilant râle, are entirely negative; so that, so far as these are concerned, the disease has to be made out in most cases solely by the method of exclusion. Where, however, pneumonia sets in, it becomes a most important sign of the preëxisting bronchitis, since it can generally be recognized either by the sputa furnished or by the ear. * * * Moreover, rheumatic inflammation has probably a large share in the production of both narrowing and dilatation of the bronchi, * * the fibrous and cartilaginous tissues of which are softened and rendered plastic by preëxisting rheumatic inflammation."

"In acute fibro-bronchitis, the exacerbations of cough occur usually during the night, while in the subacute variety of this affection this symptom is generally most troublesome during the day."

As to frequency of occurrence of fibro-bronchitis, Dr. Buckler believes, "that, as catarrh occurs sporadically, the rheumatic variety will be found in about five out of twelve cases; but that, during epidemics of influenza, the rheumatic element will be recognized in a smaller proportion of cases." And he adds, "It is believed, also, that the cartilaginous and fibrous structures of the bronchi are more frequently the seats of rheumatic inflammation than any other white tissues of the body."

Though the distinctive symptoms of fibro-bronchitis may be of a singularly negative character, and although Dr. Buckler may have erred in considering this form of inflammation necessarily and uniformly dependent upon the rheumatic element or poison, it is certain that the form of disease which he describes is of very frequent occurrence, and every physician's experience will bear testimony to the fact, that it is often very grave in its consequences. The obstinate and painful cough, profuse perspirations, and exacerbations of fever, which characterise such bronchitis, never yield to the ordinary remedies for common catarrh; while the most dangerous parenchymatous engorgement, and the most obstinate pneumonias, which we are ever called to treat, are connected with this form of disease. Though we do not think that the disease is necessarily rheumatic, because seated in the fibrous tissues, there can be no doubt that plastic inflammation of the fibrous structures of the bronchi is really of frequent occurrence, notwithstanding the silence of most thoracic pathologists upon the subject. To Dr. Buckler belongs the honor of having first described the disease to American physicians; and whatever may be thought of his theory of its etiology, he has certainly presented the subject in an exceedingly clear and practical light, and by such facts and arguments as must command the general attention of our profession.

Dr. Buckler, at the time he wrote, was probably not aware of the investigations of Dr. Black on the Pathology of the Broncho-Pulmonary Mucous Membrane. Indeed, only the First Part of Dr. Black's papers has yet been published. (*Edin. Monthly Jour. Med. Sci.*, Jan., June, 1853.) As the exceeding richness of research which characterizes this elaborate series of papers amply compensates for the poverty of Dr. Buckler's pathological investigations, we may hereafter recur to some of Dr. Black's conclusions.

Dr. Buckler proposes the following simple, but imperfect, classification of bronchitis:

Bronchitis.	Mucous—Frequently both idiopathic and symptomatic.	Acute, sub-acute, and chronic.
	Fibrous or rheumatic—Generally idiopathic; often symptomatic.	
	Fibrous or gouty—Never idiopathic; rarely symptomatic.	

He justly remarks, that "it is very remarkable that the differential diagnosis between mucous and fibrous inflammation of the bronchi should have remained without elucidation until this time, particularly when it is remembered that the relation which these two tissues bear to each other is so like that of the two similar tunics of the eye, the sclerotic and the conjunctiva. Probably the reason of this neglect is, that fibrous bronchitis is so often complicated with mucous catarrh and pneumonia." He adds, "It does not appear that any medical writer, ancient or modern, has noticed the existence of any such disease as acute, sub-acute, chronic, idiopathic, or symptomatic fibrous bronchitis, and yet it will be shown that this affection is an entity as well marked as any other in existence, and that it may be recognized by signs as clear and well defined as those which indicate a pleurisy or a pericarditis."

Our author's attention was first called to "the occasionally intractable and fatal character of catarrh, whilst attending in the spring of 1842 a patient who labored under a local bronchitis, confined entirely to the lower lobe of the right lung," which after a month terminated her life. In this case, the autopsy revealed no trace of pneumonia; "each part of every lobe crepitating on pressure. There was partial engorgement of the different lobules of affected lobe, seeming to result from intense injection of the delicate nutritious blood-vessels supplying the terminal air-tubes." Upon section of these terminal tubes of the affected lobe, when separated from the surrounding parenchyma, and washed, they exhibited in their sub-mucous tissues the only evidences found of inflammation in the pulmonary structures.

Here arise the following important questions, which Dr. Buckler proposes to answer:

> How is it that one individual recovers without difficulty from a diffused catarrh, in which all the bronchi of both lungs are involved, while another dies of a local bronchitis, involving only the air-tubes of a single lobe? And why is it that one patient may die from two square inches of pneumonic engorgement, while another, treated in the same manner, recovers rapidly from a pneumonia involving one entire lung?
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> When a man is treated for, and dies of pneumonia, or any other affection, and an autopsy is made, the attending physician is satisfied, because his diagnosis is proved to be correct. And correct it doubtless might be, as far as his observation, and the present state of medical knowledge, enabled him to go; but did he diagnosticate the condition in which the patient died, and provide properly for the dangers which it involved? Hundreds of patients have recovered from pneumonia, involving twice as much of the pulmonary parenchyma as we find in the supposed case, and why, therefore, did this or that individual die of the particular lesion discovered? What were the antecedents, the supervening accidents, or the associated circumstances, which induced the fatal result? Of what morbid condition did the patient die?

Dr. Buckler devotes a chapter to the consideration of the vascular mechanism of the pulmonary circulation, in which he gives a very satisfactory account of the mode in which fibrous bronchitis and pneumonia occur, and the nature of the grave pathological events which are thereby induced. In this connection he expresses some opinions in favor of the therapeutic value of bloodletting, which, by many of his readers, may be deemed gratuitous, and unwarranted by experience; but his suggestions on this point are certainly worthy of attentive consideration. In his discussion of the question of the rheumatic element, as connected with fibro-bronchitis, Dr. Buckler makes quotations from the writings of Tissot, Rodamel, Stoll, and Boerhaave, showing that those venerable observers recognized the frequent occurrence of a peculiar and obstinate pulmonary inflammation as an event in the history of rheumatism. But associated as such testimony is with the vague notions of an antiquated humoral pathology, it is valuable only so far as the observation of the events on which it is based is concerned.

By no one class of evidences or arguments does our author succeed in demonstrating the dependence of fibrous bronchitis upon the rheumatic diathesis, but by the *tout ensemble* of events and evidences it is rendered quite probable that the inflammation in question usually depends upon the same idiopathic causes as induce rheumatism in other fibrous tissues of the body. In the analysis of twenty-seven cases of fibro-bronchitis observed by Dr. Buckler, it does not *certainly* appear that even a majority of them were necessarily of rheumatic origin, unless the fact of the sub-mucous bronchial inflammation be taken as evidence, simply upon the ground of its being seated in fibrous tissues. With the light we at present have upon this subject, we cannot admit that fibro-bronchitis is necessarily of rheumatic origin. Indeed, we are prepared to prove, that, in a large proportion of cases, the rheumatic element does not enter into its history. Though it is not definitely known in what the specific element of rheumatism consists, it is known by what laws its manifestations are governed; and judging by these laws, and by what is known concerning the pathological history of bronchitis, we may safely conclude, that a large proportion of those cases, which by our author would be justly termed fibro-bronchitis, are really rheumatic. The eleven illustrative cases given by Dr. Buckler are, perhaps, sufficiently conformable to the rheumatic law to merit the title he applies; but what was the nature of the other sixteen cases which he introduces, does not so certainly appear.

We dwell upon this point, because we believe it to be a matter of primary importance, in the treatment of these cases, clearly to discriminate such as are of rheumatic origin from those which are of a simple plastic variety. Long before the appearance of Dr. Buckler's treatise, we had learned to recognise and treat the forms of bronchitis and pneumonia, which are associated with the rheumatic diathesis; and if we have not greatly erred in our observations and study of this subject, we have quite as often met with another class of similar cases in which there existed no evidence of rheumatism.

In this connection, we would refer to some of the results of Dr. Black's elaborate researches, which are of such a character as to merit the utmost reliance, and which we conceive will do more to advance the scientific pathology of bronchitis than all that has been hitherto written. But our references must be brief, as we have already exceeded the limits we designed for our notice of Dr. Buckler's interesting essay.

Under the head of Specific Inflammation of the Broncho-Pulmonary Membrane, Dr. Black remarks, that the bronchi are liable to specific inflammations, depending upon the different poisons of scarlatina, etc., and the morbific agents of gout and rheumatism; and that the general pathological conditions of the membrane, and the phenomena arising out of them, are very similar to those of the simple forms of inflammation, though the products of the inflammation are occasionally modified by the particular poison or diathesis which influences the system at the time. Thus the sputa of arthritic and rheumatic inflammation of the membrane Dr. Black frequently found to contain urate of ammonia, and occasionally the urates of soda and of lime.

Under the head of Bronchitis involving the submucous tissue, he says that "all the severe forms of simple bronchitis are referable to this variety"; which he has found to differ from the common epithelial catarrh in the following important particulars:

1. Respective duration. 2. Type. 3. The tissues involved. 4. Nature and composition of the discharge from the affected membrane. 5. Effects, both primary and secondary.

The following are among the many important conclusions at which he has arrived by careful investigations:

Fibro-bronchitis may be either acute or chronic, while epithelial bronchitis is always acute.

In the sputa of fibro-bronchitis there are usually found certain organic and inorganic bodies, in addition to the epithelial scales, etc., seen in the epithelial variety.

The effects of submucous inflammation of the bronchi are, bronchial obstruction, hypertrophy, ulceration, and bronchial abscess, as primary; and emphysema, bronchial dilatation, and collapse and atrophy of the pulmonary tissue, as secondary. The congestion and engorgement of the pulmonary tissues is much more intense than in simple catarrh. The sympathetic fever, or, when the engorgement is excessive, the great prostration arising therefrom, is frequently marked and dangerous.

Aided by the light which Dr. Black's investigations have thrown upon this subject, it is not difficult to make out a clear differential diagnosis in any case of bronchitis or broncho-pneumonia. And although Dr. Buckler has entirely neglected to avail himself of the aids of microscopical anatomy, and though he has even suggested the impossibility of deriving much light from dead-house investigations, Dr. Black, true to the present demands of pathological science, has faithfully interrogated nature in all the morbid conditions in the forms of disease in question, neglecting no anatomical, physiological, chemical, or microscopical research which could be made available.

As instances of the exactness and importance of Dr. Black's demonstrations, we would refer to his conclusions in reference to the pathological events of the second or plastic stage of bronchitis involving the submucous tissue.

1. That "there is invariably exudation into the submucous tissue," and also similar exudation into the basement membrane of the mucous tissue.

2. The coagulated portion of the exudation into the fibrous tissue "forms a nutritive matrix, similar to the basement membrane in the healthy condition and action of that structure; and in it germinal centres arise from molecular aggregation of the fibrin, which possesses an inherent capability of being developed into cells," and these exudation cells undergo rapid development and organization, conformably to the laws of cell-life, producing hypertrophy of the affected tissues, and consequently grave pathological consequences; or at an earlier or later period the exudation cells may undergo transformation into pus, through the agency of oxygen in respiration, the epithelium and its basement membrane of the mucous tissue becoming denuded or destroyed to a greater or less extent, and ulceration resulting.

As it was our design merely to call attention to certain points of great practical importance, we will here close this examination of these contributions to the pathology of bronchitis, by referring to the bearing which they have upon the most occult and fatal forms of disease to which the pulmonary structures are liable.

Pulmonary Tuberculosis.—Though it is undoubtedly true that tubercle is not a product of the degeneration of lymph, it is certain that inflammation of the broncho-pulmonary membrane almost uniformly precedes and accompanies the development of tuberculosis; and Dr. Black has found that an exudation of aplastic lymph is strikingly characteristic of fibro-bronchitis, in individuals of the tubercular diathesis.

Pneumonia.—The statistic observations of Grisolle and others exhibit the fact that from 25 to 30 per cent. of all cases of pneumonia are preceded for some days, weeks, or months, by well marked bronchitis; and Dr. Buckler justly asks, "If the bronchitis were suitably treated before the pneumonia sets in, might not the engorgement which complicates these cases so sadly, and adds so materially to their danger, be prevented effectually?"

Asthma.—The fact is now well established that all cases of true spasmodic asthma are found to be connected with previous and continual inflammation of the bronchia; and the rigid investigations and recent experiments of Dr. Black have furnished absolute demonstrations of the inflammatory origin of asthma, while they point out the therapeia most applicable to its cure or relief.

Gangrene.—Speaking of the complication of idiopathic pulmonary engorgement with fibro-bronchitis, Dr. Buckler remarks, that "the congestion surrounding the different pulmonary structures is so absolute, and the circulation in the delicate and tortuous branches of the nutritious arteries is in many places as effectually cut off as though a ligature were tied about them; and death of the lobules thus deprived of nutrition, or gangrenous eschars, are the necessary results."

On the subject of treatment of fibro-bronchitis, Dr. Buckler makes some pertinent suggestions; among which, he gives especial prominence to blood-letting, which he advises to be resorted to largely in the early stages if pneumonia be present. This he would follow with stimulants and stimulating expectorants, diaphoretics, mild purgatives, and ipecacuanha. Where the nervous system is especially depressed, he considers that "the administration of antimony is little less than murderous"; and he asserts that, "in uncomplicated fibro-bronchitis, antimony is of no value whatever, and its use is to be as little thought of as in the treatment of articular or any other form of rheumatism." And generally, the main indications are: "1st. To reduce plethora. 2d. To use such catalytic agents as are best calculated to relieve the inflammatory condition of the blood, and by their antiplastic effects prevent the organization of coagulable lymph. 3d. By the use of anodynes, to calm the irritability of the nervous system, quiet the cough, and thereby give partial rest to the inflamed bronchi and engorged parenchyma." And he remarks that "in all cases of this affection, and especially those attended by profuse sweating, it is very indispensable to see that the drinks and the diet of the patient are well supplied with common salt."

We trust that Dr. Buckler's interesting *brochure* will awaken a more lively interest in the observation and study of pulmonary affections; for he has certainly proposed some very interesting and practical topics for professional study, and in a field where any advancement in pathological knowledge will insure inestimable benefits to suffering humanity. E. H.

Art. XIII.—*The Pathology and Treatment of Pulmonary Tuberculosis; and on the Local Medication of Pharyngeal and Laryngeal Diseases, frequently mistaken for or associated with Phthisis.* By John Hughes Bennett, M.D., F.R.S.E., Professor of the Institutes of Medicine and of Clinical Medicine in the University of Edinburgh, &c. &c. Edinburgh, 1853. 8vo, pp. 142.

That the indefatigable and accomplished author of the ingenious and learned treatise on Cancerous and Cancroid Growths is fully competent to investigate the occult and complex history of Tuberculosis, his past contributions to science bear ample testimony; and that the inquisitive and studious pathologist, who produced the great work on Leucocythema, and who was also the first in Great Britain to propose the use of cod-liver oil for phthisis, as well as the first to publish a plausible theory of its *modus medendi*, should diligently investigate and attentively study all the pathological events and phenomena of tuberculosis, might have been anticipated.

The elegant little treatise before us shows how faithfully and intelligently these investigations have been pursued, and how successfully the author's studies have resulted in clearing up some of the most doubtful points and conflicting doctrines hitherto entertained in reference to the history and treatment of pulmonary tuberculosis.

Though some of the statements and deductions contained in this excellent treatise are marked by that unqualified confidence in certain favorite theories, and by that disposition to hasty and fearless generalization to which the author has an acknowledged proclivity, it is characterized by all that accuracy of physiological and pathological research and illustration, that clearness and candor of reasoning, and that directly practical design, which always distinguish the labors of the true medical philosopher.

Dr. Bennett devotes the first half of his treatise to the Pathology of Pulmonary Tuberculosis, which he discusses with characteristic intelligence and independence. In reference to the histology of tubercle, our author entertains no views which are individually peculiar; but he has beautifully illustrated and very lucidly stated the most important facts connected with this subject.

It is in connection with the account of the nature of tubercle, and the causes of its production, that the peculiar views and the bold philosophy of Dr. Bennett are made to appear. But, even upon these topics, we think that few candid and accurate observers will take exceptions to any of Dr. Bennett's suggestions, though he pushes his inquiries to the discovery of ultimate causes.

Though we do not think that our author has yet fully demonstrated his leading doctrine, that the formation of tubercle depends mainly upon faulty assimilation or dyspepsia, we believe that common observation strongly sustains Dr. Bennett's opinions and deductions upon this subject. Yet we think that we do Dr. Bennett no injustice by saying that his statements and his mode of argument disclose an overweaning anxiety to corroborate his favorite but questionable theory, on the 'Structural Relation of Oil and Albumen in the Animal Economy,' proposed by him in 1847. (*Edin. Monthly Jour. Med. Sci.*, Sept., 1847.)

Dr. Bennett's opinions on the subject of the etiology and the mode of formation of tubercle are already known to many of the profession, as most of the arguments contained in the work before us have already appeared in the Edinburgh Journals and the British Reviews; but we will quote the following statements, which sufficiently exhibit the author's views:

If, from the histological facts previously stated, we seek to deduce the nature of tubercle, it can scarcely be doubted that it is an exudation of the liquor sanguinis, but one which presents marked differences from the simple or inflammatory exudation on the one hand, and the cancerous exudation on the other. * * * *

We observe, in a tubercular exudation, that it occurs for the most part in young subjects, between the periods of dentition and of adult age; that it may also occur in all tissues, but is by far most common *primarily* in the lymphatic glands, and afterwards in fibrous or albuminous textures, as the lungs and serous surfaces; that its progress is generally exceedingly slow; that there is no disposition to the formation of perfect cell-formation, but rather to abortive corpuscles, which form slowly, and slowly break down; that there is little tendency to absorption, but great liability to disintegration and ulceration; and finally, that the local changes are almost always preceded by derangement of the primæ viæ, and a group of symptoms known under the name of dyspepsia.

Taking, then, the products of simple inflammation as a standard, we cannot fail to remark that while the cell-development of tubercle is below, that of cancer is above, this standard. Of the three kinds of exudation, tubercle is the lowest, and cancer the highest, in the scale.

On what this difference in the formative power of the exudation depends we are ignorant, but every kind of reasoning must lead us to the conclusion, that these different changes and effects depend, not upon the vascular system, which is the mere apparatus for the production of exudation, not upon the nervous system, which conducts impressions to and from this apparatus, and not on the texture, which is the seat of the exudation, as that varies, whilst the cancerous or tubercular formation is the same; but on the inherent composition or constitution of the exudation itself. On this point most pathologists are agreed, and hence the supposed existence of various kinds of dyscrasiæ, originating in the blood, which, its iimagined, explain the different results produced. But here pathologists pause; having once traced these lesions back to the blood, they are content; and they have not sufficiently taken into consideration that the blood itself is dependent for its constitution on the results of the primary digestion in the alimentary canal on the one hand, and the secondary digestion in the tissues on the other. Yet it must be evident to every physiologist that, if it be the constitution of the blood which determines that of exudation, the causes which produce this must be sought in those circumstances which operate on the composition of the former fluid.

Now numerous facts render it probable that, while the blood is normal in simple exudation, it contains an excess of nutritive materials in cancerous, and a deficiency of them in tubercular, exudation.

Of the dependence of tubercle upon a special diathesis, Dr. Bennett entertains no doubt; and of the wide difference between the tubercular and the cancerous diathesis, our author expresses himself even more positively than Mr. Paget. Considering tubercle, then, as a specific exudation, dependent upon a special constitution of the circulating fluid, Dr. Bennett observes that it transudes in a fluid state through the capillaries, and collects in those places outside the vessels that offer least resistance; and hence the morbid deposit is found to occur principally in the air vesicles during the early stage of tuberculosis; but whether the deposit is in any manner associated with structural changes in the epithelial cells of the vesicles, as described by Virchow and Schroeder, our author does not notice; but from his theory of the strictly humoral origin of the exudation, we infer, that on this point he would not agree with the above-mentioned pathologists.

In reference to the ultimate nature of those pathological and physiological changes in the blood, upon which Dr. Bennett believes that the origin of tubercle depends, he remarks, that "a healthy nutrition of the body cannot proceed without a proper admixture of mineral, albuminous, and oleaginous elements"; and *how* these elements combine in the primary, and form into tissues in the secondary assimilation, he ingeniously attempts to illustrate, as follows:

The successive changes which occur for the purposes of assimilation in the healthy economy may be shortly enumerated as follows: 1st. Introduction into the stomach and alimentary canal of organic matter. 2d. Its transformation by the process of digestion into albuminous and oily compounds: this process is chemical. 3d. The imbibition of these through the mucous membrane in a fluid state, and their union in the termini of the villi and lacteals, to form elementary molecules: this process is physical. 4th. The transformation of these, first, into chyle corpuscles, and secondly, into those of blood, through the agency of the lymphatic glandular system, which is a vital process. It is from this fluid, still further elaborated in numerous ways, that the nutritive materials of the tissues are derived, so that it must be evident, if the first steps of the process are imperfectly performed, the subsequent ones must also be interfered with. Hence we can readily comprehend how an improper quantity or quality of food, by diminishing the number of the elementary nutritive molecules, must impede nutrition. * * * * *

The peculiarity of phthisis, however, is, that an excess of acidity exists in the alimentary canal, whereby the albuminous constituents of the food are rendered easily soluble, whilst the alkaline secretions of the saliva and of the pancreatic juice are more than neutralized, and rendered incapable either of transforming the carbonaceous constituents of vegetable food into oil, or of so preparing fatty matters introduced into the system as will render them easily assimilable. Hence an increased amount of albumen enters the blood, and has been found to exist there by all chemical analysts, while the fat is largely supplied by the absorption of the adipose tissues of the body, causing the emaciation which characterizes the disease. In the meanwhile, the lungs become especially liable to local congestions, leading to the exudation of an albuminous kind, which is tubercle. This, in turn, being deficient in the necessary proportion of fatty matter, elementary molecules are not formed so as to constitute nuclei capable of further development into cells; they therefore remain abortive, and constitute tubercle corpuscles. Thus a local disease is added to the constitutional disorder, and that compound affection is induced which we call phthisis pulmonalis,—consisting of symptoms attributable partly to the alimentary canal, and partly to the pulmonary organs.

It will be observed that this elaborate and apparently complete theory of tuberculosis is made to depend, in a very important manner, upon the correctness of certain hypotheses which have yet to be absolutely demonstrated, viz., the structural relation of oil and albumen, and acidity of the alimentary canal.

Upon these questions we will hold no argument with our learned author, but we do request him to furnish more satisfactory proofs of the points in question.

In his chapter on the "Natural Progress of Tubercular Exudation—its Tendency to Ulceration—its Modes of Arrestment," Dr. Bennett states that "at first tubercle is deposited in a fluid state from the capillaries, in the same manner that lymph is. In this condition it insinuates itself into the interstices of the pulmonary parenchyma, passes through the lining membrane of the oil-vesicles, and fills their interior." And he further states that numerous successful injections of pneumonic, tubercular, and cancerous lungs, in his museum, clearly demonstrate that the exudation in all is poured out in the same manner, and occupies the same position in the pulmonary texture. He further remarks:

> A miliary tubercle may, in this manner, block up from three to twenty of these air-vesicles. It now coagulates and constitutes a foreign body, which can only be removed by being again broken down and rendered capable of being either absorbed or excreted. * * * This softening is a disintegration or slow death of the tubercular exudation, constituting true ulceration, which is more or less extensive according to the amount and superficial extent of the morbid deposit. When recent, the pulmonary parenchyma in the immediate neighborhood is more or less coagulated; and when chronic, it is thickened and indurated, often forming a capsule which surrounds the tubercular

deposit. * * * The bronchi are necessarily involved; their terminal extremities are among the first structures affected; and as the tuberculosis proceeds, all the appearances characteristic of chronic bronchitis are produced. As the ulcerative process extends, the lung is more and more destroyed, until at length it can no longer carry on its important functions, and the patient dies, or the fatal result, as it commonly happens, is hastened by disease in other organs.

Dr. Bennett's account of the process of this ulceration, and of the not unfrequent evacuation and cicatrization of the cavities, contains nothing new; though he justly dwells upon the obvious inferences to be deduced from the fact that such cicatrices, as well as encysted cretaceous and calcareous degenerations of tubercle, are very often and unexpectedly met with in autopsies. In a series of observations made on this point, Dr. Bennett arrived at the conclusion, "that the spontaneous arrestment of tubercle, in its early stage, occurred in the proportion of from one-fourth to one-third of all individuals who die after the age of forty."

To illustrate this subject, Dr. Bennett introduces the history of several *cases*, in which the evidences of this tendency to spontaneous cure in cases of tuberculosis have been exhibited, either by post-mortem demonstration or by the history of the living patient; but on this subject our author has offered nothing of special interest.

We must demur at Dr. Bennett's *ad captandum* style of discussion on some of the nicer and more complex questions, which by the most reliable pathologists are yet held *sub judice;* e. g., speaking of his conversations and correspondence with *distinguished physicians*, in reference to the curability of phthisis, he says: "I once made an effort to accumulate the experience of these distinguished men, on this point alone; and had I done so, it would have constituted an unanswerable amount of evidence as to the *curability even of the worst cases of phthisis*": and he gravely adds, "want of time, however, prevented them from writing down the facts."

Now it may effectually serve Dr. Bennett's purposes to make such statements; but we believe them to be as unreliable as they are unworthy the connection in which they appear. Living in the goodly city of Edinburgh, and having a reputation for great knowledge and peculiar skill in the treatment of phthisis, it may be a pleasant thing for his patrons to know that Dr. Bennett *can cure even the* WORST *cases of phthisis;* but such distinctive notoriety we should deem as unenviable as it is professionally dishonorable and unjust.

General Treatment of Tuberculosis.—On this subject Dr. Bennett does not seem to have found out anything new or important, though he has much to say about the dyspeptic origin of phthisis; and as a remedy for this state of faulty assimilation, he has unbounded confidence in the analeptic properties of the cod-liver oil. He would base the treatment solely upon the following pathological propositions: 1st. That tubercular diseases will heal of themselves, if we can support the nutrition of the system. 2d. That, with this view, our efforts should be rather directed to the digestive than to the pulmonary system. And, 3d. That the kind of morbid nutrition which exists, is excess of albuminous and deficiency of the fatty element in the chyle.

To illustrate his views of the curability of phthisis by the agencies he has indicated, Dr. Bennett has introduced a tedious history of twenty-five cases; but, unfortunately, they do not establish any of the principles proposed, for the histories of these unfortunate patients are too faithfully represented by "CASE 25.—*Advanced Pulmonary Tuberculosis; Cod-Liver Oil; Death from want of perseverance in remedial measures.*"

Dr. Bennett, in common with most physicians, has often seen the progress of tuberculosis arrested in its early stages, and occasionally has seen cases of unquestionable tubercular disintegration and phthisis actually recover. He has witnessed the unquestionably salutary effects of cod-liver oil, and improvement of the patient's hygiene; but we think that he has yet to show that tubercular phthisis is essentially and generally a curable disease, by the means which he has proposed. Not that there exists a doubt of the fact that a certain small proportion of cases are cured spontaneously, or by treatment, but that all that is known concerning the history of pulmonary tuberculosis shows it to be a grave constitutional malady, usually hereditary, and in a large majority of cases, tending to a fatal termination.

But there are certain grave forms of inflammatory and ulcerative disease of the bronchi and the larnyx, often, and we believe generally, mistaken for tubercular phthisis, and which, though too often fatal, are nevertheless perfectly amenable to curative treatment. These affections of the air-passages may and should be accurately discriminated by physicians; and, with the knowledge which now exists on the subject of physical diagnosis, and aided by such excellent treatises as that of Mr. Ancell on Tuberculosis, and of Dr. Black on the Broncho-Pulmonary Mucous Membrane, no physician can have an apology for permitting this very large and interesting class of patients to become the victims of charlatanry, much less can there be an apology for error or failure in the management of the diseases in question.

Dr. Bennett has very properly devoted the last chapter of his work to 'Observations on the Use of Local Applications to the Pharyngeal and Laryngeal Diseases, which are frequently mistaken for, or associated with, Pulmonary Tuberculosis'; to which, singularly enough, even he had paid no attention until some two years ago, when he met with the writings of Dr. Green, of this city, and from these he seems to have acquired his knowledge on this subject; though it is well known to the profession that an excellent treatise on Laryngeal Phthisis, etc., by MM. Trousseau and A. Belloc of Paris, published in 1837, first described this class of diseases, and made known the mode of local treatment, which has lately become so popular.

Dr. Bennett attempts no elucidation of the pathology of these local affections, but gives the history of several cases illustrative of the value of the local treatment with the *nit. argenti;* and from which he draws the following conclusions, 1st, That not unfrequently diseases, entirely seated in the larynx or pharynx, are mistaken for pulmonary tuberculosis; 2d, That even when pulmonary tuberculosis exists, many of the urgent symptoms are not so much owing to disease in the lung, as to the pharyngeal and laryngeal complications; 3d, That local treatment may not only remove or alleviate these complications, but that, in conjunction with general remedies, it tends in a marked manner to induce arrestment of the pulmonary disease.

Though these conclusions are important and true, we regret that Dr. Bennett has not more to offer upon this subject, and that he has not more thoroughly studied the pathology of these local affections, for they not only deserve to be investigated *de novo*, but we are satisfied that when their pathological history comes to be better understood, the special topical medication will be more intelligently applied, and at the same time assume less importance in the history of cure.

From this examination of Dr. Bennett's work, it will be observed that it cannot lay claim to the dignity of a complete treatise on pulmonary tuberculosis, but that it is rather a hastily-prepared, and imperfect monograph, issued to make known a new theory, and to illustrate the peculiar doctrines of its author. How far it may prove available for practical purposes and the advancement of sound pathological science, remains to be seen. E. H.

BIBLIOGRAPHICAL NOTICES.

ART. XIV.—*The Elements of Materia Medica and Therapeutics.* By JONATHAN PEREIRA, M. D., F.R.S.A., L.S. Third American Edition, Enlarged and Improved by the Author. Including Notices of Most of the Medical Substances in Use of the Civilized World, and forming an Encyclopædia of Materia Medica. Edited by JOSEPH CARSON, M. D., Professor of Materia Medica and Pharmacy in the University of Pennsylvania. Vol. 1, 8vo, pp. 838, 1852, and vol. 2, pp. 1226, 1854. Philadelphia: Blanchard & Lea.

IT is with mingled feelings of pleasure and pain that we announce to our readers the completion of this exceedingly valuable work—pleasure that a new edition of a work of such great merit is now accessible to the mass of the profession—and of pain when we remember the sudden and unexpected demise of its distinguished author, at the moment when the completion of the work was so near at hand. Many, if not all our readers, are aware of the fact that the last volume of this edition comes to us in part, only, completed by the author. The completeness of this edition in this respect, however, is far greater than that of the last English. In the revision of it, says the author, "the recent publication of new editions of the London and Dublin Pharmacopœias, rendered necessary a careful revision of the formulæ of the British Colleges, and entailed on me no trifling labor. I have embodied all recent discoveries of importance which relate to the subjects treated of in this work," (*Author's preface to Amer. Edit.*)

The labors of the author on the first volume, with especial reference to this American edition, are a gratifying proof of his desire to render it a perfect encyclopædia of Materia Medica, suited to the wants of the American, as well as English practitioner of medicine, while at the same time they have placed the American public in possession of "the last revised work of Dr. Pereira, and the most complete that he published." From the preface of the English editors to the second volume we learn that "at the time of his decease, the learned author had so far advanced with the present volume as to have completed the description of that important article of the Materia Medica, CINCHONA." The remainder of the volume passed under the revision of Drs. Taylor and Rees, and in the performance of their duties they have not deemed it proper to interfere with the views or opinions of the author, but, when circumstances rendered it necessary they have added such remarks as appeared to them requisite for the further elucidation of the subject.

The work as a whole, we perceive, has assumed an entirely new shape. The mineral substances of the Materia Medica have been placed entirely in the first volume, and the organic in the second, and numerous additions have been made to each department, particularly the organic. "The additions comprise four hundred pages of new matter; and the articles of Materia Medica, of which a complete medical and scientific history is given, amount to three hundred and sixty." From this extract it will be seen that the author and editors have each availed themselves of the advantages which the progress of science offered to render complete and useful this edition to the present time; and when we remember that Philology, Natural History, Botany, Chemistry, Physics, and the Microscope, are all brought forward to elucidate the subject, one cannot fail to see that the reader has here a work worthy of the name of an encyclopædia of Materia Medica. Our own opinion of its merits, is that of its editors, and also that of the whole profession, both of this and foreign countries—namely, "that in copiousness of details, in extent, variety, and accuracy of information, and in lucid explanation of difficult and recondite subjects, it surpasses all other works on Materia Medica hitherto published." We cannot close this notice without alluding to the special additions of the American editor, which pertain to the prominent vegetable productions of this country, and to the directions of the United States Pharmacopœia, in connection with all the articles contained in the volume which are referred to by it. The illustrations have been increased, and this edition by Dr. Carson cannot well be regarded in any other light than that of a treasure which should be found in the library of every physician.

ART. XV.—*A Treatise on Venereal Diseases.* By A. VIDAL (de Cassis,) Surgeon of the Venereal Hospital of Paris, &c., &c., with colored plates. Translated and Edited by GEORGE C. BLACKMAN, M. D., Fellow of the Royal Medical and Chirurgical Society of London, &c., &c. New-York: Samuel S. and William Wood. 1854. 8vo, pp. 499.

THE appearance of a new work on venereal diseases, translated from the French, will not create any great surprise, so numerous have been the contributions to this subject from abroad within the last year. But the studious physician will recollect that most of these republications and translations have emanated from the school of Ricord. He is also aware that the doctrines of this great teacher, in regard to the transmissibility of secondary accidents, a virulent blennorrhagia, &c., have been called in question, and raised an opposition which combines the best surgical talents of France, Germany and England. The whole ground has been reviewed, and each subject examined by the contending parties before the Academy of Medicine, Paris, in one of the fiercest discussions which that learned body has ever witnessed. Most prominent among the leaders of the opposition to the received doctrines of syphilis is Ricord's confrère, in the Hôpital du Midi, M. Vidal, the author of the work before us.

We cannot at this time do more than express a general opinion of the character of this treatise. We have, of course, as the basis of the work, the peculiar views of the author, which are considered at length and with much spirit in opposition to those so long advocated by Ricord. This does not, however, enter into the practical portions of the volume, which will be more generally sought after, and with which we are much pleased. It is more complete in practical details than any work which the practitioner can ordinarily consult, and for this reason may be especially commended to his attention.

Dr. Blackman has performed his part as translator and editor, in the most satisfactory manner. His personal familiarity with the practice of M. Vidal, whose views he cordially advocates, and also of his great opponent Ricord, as well as an extensive acquaintance with the literature of the subject, peculiarly qualified him for the task. Every subject treated by the author has been prepared by the editor to meet the wants of the American practitioner; and several, too briefly examined by the former, have been enlarged by the latter.

The typographical execution of the work is good, and the illustrations, with colored drawings, are numerous and excellent.

ART. XVI.—*Pneumonia: Its Supposed Connection, Pathological and Etiological, with Autumnal Fevers:* Including an Inquiry into the existence and Morbid Agency of Malaria. By R. LA ROCHE, M. D., Member of the American Philosophical Society; of the American Medical Association; Fellow of the College of Physicians of Philadelphia, etc., etc. Philadelphia: Blanchard & Lea. 1854. 8vo, pp. 502.

THIS goodly volume, we are told by the author, has grown to its actual respectable dimensions from very small beginnings. The first step in its production was the writing of a friendly letter of a dozen pages to a valued friend, who holds an important position among the teachers of a distant State, in review of a clever essay by him on pneumonia. The main object in the preparation of the volume has been to point out the erroneous views entertained by respectable writers on certain pathological and etiological subjects; and this not alone in reference to pneumonia, but the whole class of paludal fevers; and also to prove that etiologists, who regard the various forms of autumnal fevers as due to the action of particular poisons floating in the atmosphere of specific localities, have just cause for entertaining that belief. As our space does not permit us to give more than a passing notice of this work, on the present occasion, we will simply add that a more ample, clear, and forcible exposition of the groundless nature and dangerous tendency of certain pathological and etiological heresies, has seldom been presented to our notice.

ART. XVII.—*A Text-Book of Anatomy, and Guide in Dissections for the use of Students of Medicine and Dental Surgery.* By WASHINGTON R. HANDY, M. D., Professor of Anatomy and Physiology in the Baltimore College of Dental Surgery, late Professor of Anatomy and Operative Surgery in Washington University, Baltimore. With 264 Illustrations. Philadelphia: Lindsay & Blakiston, 1854, 8vo., pp. 810.

THAT the school of Baltimore can justly lay high claims to literary eminence in dental science does not admit of question; and their untiring zeal and attention to dental education is evidenced in their frequent publications of an elementary character, pertaining to the science of dentistry. This work of Dr. Handy has evidently been designed with special reference to the claims of the student and practitioner of dental surgery; and, to use his own language, his leading object has been to prepare a work "adapted alike for the dental as well as medical student—one which directs *special attention to the mouth.* Showing, step by step, the important anatomical and physiological relations which it has with each and all the organs and functions of the general system." In carrying out this design, the author, after giving a general outline of organization, divides the work into four parts.

The first part teaches the *alphabet* of Anatomy on the elementary tissues of the body. The second part begins with the head, and describes its organs, as far as possible, in their functional order and dependency. This part is the most complete, by showing the anatomical and physiological relations of the mouth with the different parts of the head. The third part, embracing the trunk, is examined in the same physiological order, and completed in the same manner, by demonstrating the *relations* of the *mouth* with its several organs, viscera and functions. The fourth part comprises the extremities, which do not admit of the same kind of arrangement so readily, and are demonstrated in the ordinary way. The work is one admirably adapted to the wants of the dental student, and will, we doubt not, receive from this class a meritorious consideration.

ART. XVIII.—*Chemistry and Metallurgy, as applied to the Study and Practice of Dental Surgery.* By A. SNOWDEN PIGGOT, M. D., late Professor of Anatomy and Physiology in the Washington University of Baltimore. With numerous Illustrations. Philadelphia: Lindsay & Blakiston, 1854, 8vo., pp. 516.

THAT a work like the above has, for a long time, been a desideratum in the practice of dentistry, does not admit of a doubt. To the student and practioner of the dental art, a knowledge of scientific chemistry is absolutely necessary to the successful practice of their profession, and at the present day no one can lay claims to eminence and respectability in mechanical dentistry, who depends upon empiricism for the successful results of his manipulations in the laboratory. It is not alone necessary that one should understand the behaviour of metals and other materials used in the workshop, but a full knowledge of the chemical principles involved in the organic changes originating in the mouth, under an almost infinite variety of conditions, is needful to the successful practice of dentistry.

The work before us, we perceive, has been prepared with reference alike to the wants of the student and the demands of the advanced workman in the performance of his daily duty. In the practical details of the work we observe precision, while, in those portions relating to animal chemistry, there is all that fulness of description necessary to a successful knowledge of its important bearings. We commend the work as worthy the attention of the practical dentist.

ART. XIX.—*A Treatise on the Diseases of the Eye.* By W. LAWRENCE, F.R.S., Surgeon to St. Bartholomew's Hospital, etc., etc. A new edition. Edited, with numerous Additions, and Two Hundred and Forty-three Illustrations, by ISAAC HAYS, M. D., Surgeon to Willis Hospital, etc., etc. Philadelphia: Blanchard & Lea, 1854, 8vo., pp. 948.

THIS is a new and enlarged edition of Mr. Lawrence's excellent work on the Diseases of the Eye. The editor, Dr. Hays, has made many valuable additions to portions of the work which had fallen into the back ground, from the advances in ophthalmic physiology, pathology, and therapeutics, since the issue of the former editions. It has always been considered a standard work, and may now be regarded as one of our most complete treatises on the diseases of the eye, and fully illustrating the most recent and improved views of authorities at home and abroad.

ART. XX.—*Elementary Chemistry, Theoretical and Practical.* By GEORGE FOWNES, F.R.S. Edited, with Additions, by ROBERT BRIDGES, M. D. A new American edition, from the last and revised London edition. With numerous Illustrations on Wood. Philadelphia: Blanchard & Lea, 1853, 8vo., pp. 555.

WE have here a new and revised edition of one of the best elementary works on Chemistry, accessible to the American and English student.

ART. XXI.—*The Medical Formulary; being a Collection of Prescriptions derived from the Writings and Practice of many of the most eminent Physicians in America and Europe.* By BENJAMIN ELLIS, M. D. Tenth edition, revised and much enlarged. By ROBERT THOMAS, M. D., Professor of Materia Medica and Pharmacy in the Philadelphia College of Pharmacy. Philadelphia: Blanchard & Lea, 1854, 8vo., pp. 296.

THE great popularity of this work renders any farther notice of it unnecessary, than the simple announcement of the publication of a new and *revised* edition.

ART. XXII.—*A Practical Treatise on Inflammation of the Uterus, its Cervix and Appendages, and on its Connection with Uterine Disease.* By JAMES HENRY BENNET, M. D., Member of the Royal College of Physicians, etc., etc. Fourth American, from the Third London edition. Philadelphia: Blanchard & Lea, 1853, 8vo., pp. 430.

THE fourth edition of Dr. Bennet's popular work on the diseases of the Cervix Uteri has been carefully revised by the author, and improved by the addition of new matter. The former editions have now become so widely diffused by republication and translation into continental languages, that the approbation of the profession may be considered strongly pronounced in favor of the work as a practical treatise on the views which it sets forth.

Art. XXIII.—*Prize Essay on the Use and Abuse of Alcoholic Liquors, in Health and Disease.* By William B. Carpenter, M. D., F.R.S., author of the Principles of Phpsiology, etc. With a Preface, by D. F. Condie, M. D., author of a Practical Treatise on the Diseases of Children, etc. Philadelphia: Blanchard and Lea. 1853. 8vo. pp. 178.

This is a reprint of the essay, to which was awarded the prize of one hundred guineas in the latter part of the year 1849. The successful essayist proved to be Dr. Carpenter, the distinguished physiologist and writer. The essay is a truthful, candid, and scientific examination of the questions proposed by the donor of the prize; these are given in a former notice. The conclusions of Dr. Carpenter are decidedly against the use of alcoholic liquors except for medical purposes, and the array of facts which he adduces to sustain his positions is truly formidable. He entered upon this investigation unbiassed by any preconceived notions, but concludes it a firm and consistent advocate of total abstinence.

Art. XXIV.—*Human Anatomy, Physiology, and Hygiene.* By T. S. Lambert, M. D., Lecturer on Physiology at the Pittsfield Institute (for Young Ladies), Greenleaf's (Brooklyn), Rutger's Institute, (New-York), etc. Illustrated with nearly Three Hundred Woodcut and Lithographic Engravings. Hartford: Brockett, Hutchinson & Co. 1854. 8vo, pp. 456.

The examination of this book for schools has given us much pleasure, and we do not hesitate to pronounce it admirably adapted to the necessities of the advanced pupil who is in the pursuit of that degree of anatomical and physiological science, without which no one can be considered educated. We are especially gratified with the endeavor of the author to give the latest and most approved views in anatomy and physiology, and heartily second the remark of the publishers that, "To use a book which is behind the times, or in any considerable degree inferior to what it may be made, is still worse for both scholar and teacher." Long experience in teaching the elementary principles of anatomy and physiology has peculiarly qualified the author to appreciate the wants of both teacher and pupil. The style is clear and perspicuous, and the arrangement of matter well calculated to give the learner clear views of each subject as it is presented. The work is fully illustrated with engravings, which will greatly facilitate the progress of the student, and aid him in acquiring just ideas of the structure and functions of various organs.

PART THIRD.

FOREIGN MEDICAL RETROSPECT.

PATHOLOGY AND PRACTICAL MEDICINE.

On the Diagnosis of Uræmic Blindness and Dyspnœa, by W. H. Walshe, M. D.—I have recently seen, out of doors, a very striking example of uræmic blindness; one illustrating so plainly the occasional difficulties of its diagnosis, that I will avail myself of the particulars for the discussion of the general question.

Case.—On the 12th of November last, Mr. J. R. Wells brought me a patient of his under the following circumstances:—" Mr. ——, aged 29, widower, leading a steady and quiet life, has generally enjoyed good health. Ten years ago, he had a peculiar contraction of the right leg, the tendons feeling stiff in the ham. Three years ago, he was ill for a fortnight with sore throat. He has now been ill for upwards of two months. A fortnight ago, boils commenced to form about his body; one, above the left orbit was followed by great pain on the spot. All of these boils got well; he felt generally ill and depressed, but was improving, when, ten days ago, he found he could not see as usual; the left eye being decidedly the worse of the two. He had no cephalalgia, nor swelling of the face. Nov. 12th. *Present State.* (*a*) He looks depressed, somewhat stupid; has slept badly for last two nights, without bad dreams; spirits low; temper of late rather morose; inclined to talk to himself. (*b*) The skin is pale and sallow; he does not perspire; there is no skin affection of any kind; no distinct swelling about eyelids; he says they are stiff; no swelling of ankles. (*c*) The legs are weak, about equally so; if any difference, the left is the worse (*vide k*). (*d*) Tongue tolerably clean; bowels open from medicine; anorexia. (*e*) Resonance is good under clavicles; no chest symptoms. (*f*) Heart's action is rather too extensively felt; first sound at base and apex rather too clear and full; no murmur at heart (pulse 76); strong venous hum in neck. (*g*) No swollen lymphatic glands. (*h*) Urinary organs patient declares to be in good order; three years ago, however, he had hæmaturia, for which he knew no cause. (*k*) Moderate headache at vertex; no vertigo; no tinnitus; no peculiar sensations of any kind in head; intellect perfectly clear; some stiffness in joints of upper extremities, shoulders most, right and left the same; he squeezes awkwardly with left hand, but about as forcibly as with right; no deviation of tongue; articulation quite distinct; no peculiar sensations in limbs. (*l*) No convulsive movements anywhere. (*m*) Pupils medium sized, round; contract immediately and gently well under light (merely that of the room); then expand a little; the action is not distinctly different on the two sides; no opacity in either eye; no amaurotic look; no photopsia; no muscæ; and no spontaneous pain in the eye-balls; no photophobia, but is pained, he thinks, by continuing the effort to see; he cannot distinguish moderate-sized objects at opposite side of the street; cannot read small print at all; sees better in morning when he gets up, and with strong light; has never had diplopia."

Here, then, was an anæmic person, suffering from boils (which were, as is well known, epidemic at the time), but caring neither for his anæmia, nor his boils, nor the general disturbance of health accompanying these, but solely anxious about the sudden and increasing failure of his sight. Were the eyes themselves diseased? No opacity could be discovered in either; membranes and humours appeared perfectly transparent. That the cornea, chambers, lens, and its capsule, were free from any change sufficient to explain the symptoms, was, in fact, unquestionable. Again, disease of the retina, producing blindness, if acute, would have been attended with local symptoms, weight and fulness in the eyeball, with throbbing pain, photopsia, change of color of the irides, etc., and with fever—conditions all of them wanting here. Chronic retinitis is attended with morbid sensibility to light, which our patient did not complain of. It is so infinitely unlikely that tumours connected with the deep-seated tissues of the eye should form simultaneously in both organs, that the idea of their existence here might, almost without examining the globes themselves, be rejected. Disease of the optic nerves, or their sheaths, enlarges the pupil, paralyses the iris, and very, very rarely attacks both sides simultaneously; it was, therefore, not the cause of the blindness here. Nor could the case be supposed one of idiopathic amaurosis. The eyes had not the amaurotic look nor expression; there was no lustre of their surface, no rolling or unsteady movements of the eyeballs, and none of the peculiar vacant gaze of that affection. This patient, on the contrary, directing the axes of the eyes appropriately, *looked as if he could see well.* . .

The least reflection on the condition of the patient's motor and intellectual faculties satisfies us that none of the ordinary affections of the brain could have existed here. Neither meningitis, simple or tuberculous, nor hæmorrhage, produces blindness of the type before us; and, though both acute and chronic softening do actually cause impairment of vision on one, or even on both sides, blindness never constitutes the prominent symptom it did here;. besides, all other evidences of softening were deficient. But it was not so easy to exclude tumour of the encephalon. For not only has blindness, more or less complete, been a frequent symptom in cases of intra-cranial morbid growth, but actually, next to cephalalgia, their most, or nearly their most, frequent symptom. This is true of tumours of the cerebrum, cerebellum, pons, and pituitary gland; a circumstance showing, by the bye, the vainness of the attempts to diagnosticate the seat of a cerebral tumour, solely through the perversion of special senses. It is true that there was no cephalalgia of note in this instance, but cephalalgia may be absent from first to last, even in protracted cases; and we might have been at the commencing period of the formation, at which period, there is every reason to believe, if not to be absolutely certain, the head is often free from pain. Intra-cranial tumour was, therefore, by possibility the cause of the failure of vision in this patient. But, again, there are cases on record, tending to show that injuries to the supra-orbitar nerve may produce obscurity of vision, nay, complete blindness. It is true that some observers hold that, in all such alleged cases, there has in point of fact been concussion of, or other injury to, the eyeball itself; but the weight of the evidence seems to me decidedly in favor of injury to the branch of the fifth nerve named sufficing to impair vision. Now the patient had had no traumatic mischief done to his eyebrows, it is certain; but he had had a boil there, the source of much pain and irritation; and it seemed an admissible hypothesis that the local inflammation might have acted the part of a wound in the spot. It is alleged that the nerve of one side only being implicated, the eye of the other has suffered by sympathy.

It was certain the patient had not been taking any of the drugs—belladonna, aconite, stramonium, etc.—which injure sight. Besides, the pupils were not dilated. Hæmic or blood-diseases (I use the adjective as more euphonious), are many of them, more or less constantly, attended with perverted vision. Now our patient was anæmic to a high degree; but I could not admit this to be the cause of his blindness; for though impairment and perversion of sight often attend this state, they never, as far as I know, do so to the extent observed here; they never constitute the prominent enduring symptom of the state. But anæmia might here be fairly taxed with increasing the blindness, though *essentially* otherwise caused. But however plausible it might have appeared to refer the imperfect sight either to encephalic tumour, or to implication of the frontal nerve, examination of the urine, a few days later, furnished a much more satisfactory clue to the symptom. The fluid was highly albuminous. We now ascertained from relatives that the daily amount was small (a fact previously denied by the patient). A few days later, the eyelids were distinctly, though very slightly, œdematous; the ankles remained free from dropsy throughout. The most active measures failed to produce any secretion from the skin, which continued to the last day dry and harsh.

Between this period and that of the patient's death, on the 29th of November, one or two circumstances occurred worthy of note. The hydrochloric acid test succeeded strikingly; the expired air gave thick opaque fumes; but in this instance, as in many we have seen in the wards together, the breath was of strongly urinous odour—a state quite as significant of uræmia, as an affirmative result by Frerichs's test. For several days before his decease, the patient had *uræmic dyspnœa*, as I would call it—a dyspnœa evidently depending on the morbid state of the blood: for there was no pulmonary nor cardiac affection to explain it; the percussion sound was excellent everywhere; there was no rhonchus, no serious alteration of the respiration-sound, and no cardiac disease. The pulse-respiration ratio averaged during this time 3:1, both pulse and respiration being, absolutely speaking, very frequent, namely 120 and 40. But there was an amount of breathing distress materially greater than attends a respiration of forty per minute: to this the poisoned blood was the apparent clue. Now, remarkably enough, this patient remained, almost to the last moment, free from the more ordinary effects of uræmic poisoning. The brain and cord gave no sign of suffering; his intellect continued clear; there was neither delirium nor sopor; and convulsions did not occur. This dissection of the effects of the kind of poisoning in question is not uncommon; the brain and vision may alone be affected; or the vision, the functions of the spinal cord, and those of the brain may suffer simultaneously.—*Assoc. Med. Jour.*

Disorders of the Renal Secretion in Delirium Tremens, and in Injury of the Spinal Cord.—The *Montreal Medical Chronicle* condenses from the *Medical Times and Gazette* the following interesting observations of Dr. Bence Jones:

Delirium Tremens, a congestive disease, is occasionally seen here in fearful intensity. Its resemblance to the diseases previously noticed is most apparent in the presence of albumen in the urine, in the state of the kidney and in the tendency to epileptic convulsions. The following cases illustrate my observations on congestion of the kidney in delirium tremens:—

A man of 35, with delirium tremens, had not slept for three nights; two hours after admission, he had an epileptic fit; two days after, the urine had a sp. gr. of 1019.3, a trace of albumen and blood globules; fibrinous casts not clearly determined. After two more days of extreme violence he had two convulsive fits, in the last of which he died. *Post mortem*, both kidneys large; much congested on surfaces and lobular; capsules peeled off easily; on surface a few slight pits, as if from atrophy, but elsewhere quite smooth.

A man of 35, five days ill, with seventh attack of delirium tremens. On admission, passed 6 oz. of urine, deeply red, having traces of blood, albumen and fibrinous casts: sp. gr. 1018. He slowly recovered, urine being 1027.9 and free from albumen.

A man of 40, three days under a third or fourth attack of delirium tremens. After a most excited night, the morning urine was albuminous and abounded in urea and sulphates: sp. gr. 1037.8. Passed, later in the day, the albumen was increased sp. gr. 1041.2. He died next day. The kidneys were congested, the malpighian tufts full of blood; several small cysts in the cortex, but structure otherwise healthy.

Such cases might be mistaken for Bright's disease, and by repetition might induce it, but I have found that when the congestion subsided, the albumen disappeared without any treatment directed to the kidneys. When the renal congestion of delirium tremens, cholera and scarlet fever passes into inflammation, pus is rarely found in the urine. But there is another form of congestion—also from acute disease—affecting the ureter and bladder as well as the kidney, where the signs are more perceptible. Severe injury of the upper part of the spinal cord, usually causing death in twenty-one days, is truly an acute disease: laceration from fracture often causes great congestion and purulent urine, the degree, however, varies—the urine may be healthy and the kidneys but slightly congested; the urine simply purulent; urine purulent and alkalescent; as examples—

Of the first degree—A man of 35 fell across a piece of wood and broke the sixth and seventh cervical vertebræ. Completely paralysed below mammæ. Urine the day after admission, very acid and 1023.1; on the 3d, 8th, 9th, 16th and 18th days, also acid, and sp. gr. 1018, 1022, 1023, 1011, 1011. On the 21st day he died, the pulse getting slower and weaker and dyspnœa increasing. The cord, for one and a half inches, diffluent. Several ruptures, about two lines in depth, on front of right kidney, but no inflammation. Other kidney normal.—A man of 30 fell from a roof forty feet high, where he went when drunk to escape from imaginary thieves; sixth and seventh cervical vertebræ broke and the cord tore across: ten hours afterwards no urine in bladder; nineteen and a quarter hours after some urine drawn off, which was strongly acid and stayed so for seven days; sp. gr. 1012, and contained a few blood globules. He died twenty-two hours after the fall; great congestion of kidneys but none of lining of pelvis or ureters; bladder healthy and full of urine.

Of the second degree—when the urine is purulent and acid throughout. A man of 31 fell out of a cart and broke the first dorsal vertebra. On the fifth day paraplegia was complete and the urine was acid 1014.2. Sixth day urine acid, 1030.2, much urates, some cells like pus, with some blood. Seventh day as last. He died during the night of dyspnœa from pulmonary congestion—the lining of left kidney slightly inflamed, some semi-purulent fluid in the hilus; bladder rather full of urine, which, except slight turbidity, seemed healthy; mucous membrane natural.—A man of 48 fractured sixth and seventh cervical and the second and third dorsal vertebræ: twelve hours after, urine acid, 1019.4. Second day, highly acid; remaining so for seven days in June 1025.3. Third, acid, remaining so at least five days, 1027, deposited crystals of uric acid; had some albumen and pus cells. Fourth, 1024.1, acid, a trace of albumen, pus less distinct. Fifth, acid, 1027.8, some blood, pus doubtful. He died in the afternoon comatose: lining of pelvis of both kidneys very slightly congested; bladder healthy.

The preceding shows that the inflammation of the lining of the kidney precedes that of the bladder, and causes pus in the urine before the alkalescence appears, and the sp. gr. falls. The same sequence attends the cases of the third degree. A glazier, 39, broke the fourth and fifth cervical vertebræ: paraplegia complete. Fourth dry, urine acid, 1029.2. Sixth, acid, 1030.2, no pus, but great deposit of urates. Eighth, acid, 1022.0, thick from urates; no pus, no albumen. Ninth, less acid, 1007.3; a little pus. Tenth, very full of pus, 1010.8; neutral, ropy in sixteen hours. Eleventh, alkaline, much pus, too decomposed to take the sp. gr.: continued so till the 22d day, when he died. For the last six days much diarrhœa. The lining of the ileum for two feet intensely vascular and dark; in its submucous areolar tissue a few small ecchymoses; free surface covered by a dark red or almost black tenacious mucus. Intestinal glands healthy. Left kidney very vascular and studded with small abscesses. Infundibula pelvis and beginning of ureter very vascular and distended with pus. Right kidney also vascular, but less than left. Bladder held much pus and highly vascular. In the next case the pus appeared much earlier in the urine. A laborer, 35, broke the eleventh dorsal vertebra, and was completely paralysed. Second day, urine slightly acid, 1029.2. Fifth, acid, and remaining so for four days, 1025.3. Sixth, slightly alkaline, mixed with blood and pus. Seventh, highly ammoniacal, 1022.8, ropy mucus. Thirteenth, extremely foul, 1007.8. He died on the thirty-eighth day. Both kidneys smooth but soft; much congested; lining of calices, infundibula and pelvis of left kidney very much congested, and in several places thickly covered with lymph. No such appearances in left kidney, but urine squeezed from it was puriform and alkaline; some of its mammary eminences much congested. Bladder slightly thickened, and muscular coat fasciculated; mucous membrane slightly congested in patches and highly ulcerated. A false passage between prostatic urethra, and a large and very foul abscess between the bladder and rectum.

It may be concluded, 1st. That injury of the cord does not immediately affect the renal secretion; and 2ndly. That inflammation of the mucous membrane precedes and probably causes ammoniacal urine. The effect of the inflammation upon the density of the urine is instructive, as in Bright's disease the same low density usually occurs. In none of the cases I have seen has the temperature been increased, though this occasionally occurs, as in Sir B. Brodie's case of a man who had a severe spinal accident, and died in twenty-two hours. At last there were but five or six inspirations a minute, and yet his groin was 111°. From Bernard and Budge's experiments, it is probable that there is only increase of heat when the sympathetic nerve is injured, and that when the cord alone is injured the heat falls. Sequard refers the phenomena of injury to the sympathetic, to paralysis or dilatation of the vessels. The blood, finding a larger way than usual, arrives in greater quantity, and hence nutrition is accelerated.

I have but little to say upon treatment. In delirium tremens the congestion may be from the action of alcohol in the blood on the kidneys, or more often from the stimulation of the heart and bloodvessels. I have never cupped, but have allayed the excitement and quieted the circulation by opium, and thus got urine free of its blood. In injury of the cord, congestion results from paralysis of the capillaries. We judge of what goes on from analogous states of the eye that are visible. In paralysis of the ophthalmic nerve, the conjunctiva is often vascular, and gets more or less actively inflamed. So also from section of the pneumogastric, congestion first and inflammation next of the lining of the bronchi and stomach, results. In injury of the cord there is the same tendency to congestion of the mucous membrane and skin. In one case most marked in the kidneys, in another in the bladder, and in another in the intestines. As the injury is irreparable, so the effects can only be palliated. The putrefying urine must be drawn off at least twice daily, so that its irritation may not add to the cystitis. Injection of warm water is sometimes useful, but sedulously avoid the the slightest mechanical injury which would aggragate the symptoms."

Conclusions drawn from the Results of Re-vaccination of 257 *Cases.* By W. Bird Herapath, M. D., of Bristol.

The inferences to be deduced from a consideration of these experiments are the following:—

I. That three cases re-vaccinated within seven years were not again susceptible to vaccine.

II. That vaccine, after the interval of from eight to seventeen years, does not prevent the reception of vaccine again, except in 22·174 per cent.

III. That the distinctness or imperfection of the vaccine cicatrix does not materially alter these results.

IV. That variola does not prevent the formation of the vaccine vesicle, except in about 23·53 per cent.

V. That the occurrence of small-pox subsequently to vaccination does not destroy the susceptibility of the human system to again receive the vaccine poison, except in about 10 per cent.

VI. That in all the previous cases, whenever the secondary vaccine vesicle assumed its perfect form, its subsequent history was the same as if the system had not previously labored under vaccine variola or varioloid.

VII. It is probable that the protective influence of vaccination has diminished in consequence of repeated transmission of the vaccine matter through the human body.

VIII. It is desirable that re-vaccination should be extensively followed, as one means of giving additional protection to the masses.

IX. That when possible, the stock of vaccine should be renewed by going back to the original source.—*Assoc. Med. Jour.*

Treatment of Tetanus.—Dr. Lawrie gives (*Glasgow Med. Jour.*), the statistics of this disease with the following conclusions as the result of his investigations into the success of different methods of treatment. —"It may be asked if, as the preceding summary would appear to show, no remedy yet tried has done good, and many have done harm, how are we to treat tetanus? I reply, negatively; put the patient into a dark room, keep him absolutely quiet, don't torture him with remedies proven to be useless, give him as much nourishment as he can swallow, and trust the result to the powers of his constitution. If the spasms are severe, alleviate them by chloroform. Still, I do not despair that a remedy will be found, if not adequate to cure the disease, yet powerful enough to enable us to "fight against death," until the chronic stage is established, and the result can with some confidence be intrusted to nature. Such a remedy I would look for among the anæsthetics. The discovery by Mr. Richardson of the virtues of the Lycoperdon Proteus, encourages the hope that many substances in the vegetable and mineral worlds will yet be found, possessed of powers analogous to those of chloroform, but so far different as to make them curative in cases in which that wondrous agent is only palliative, if not at times injurious. Unfortunately, chloroform excites tetanic spasms, and interferes with and arrests respiration and circulation. Shall we ever discover a remedy which will relax and never excite spasm, and continuously deaden pain without causing pulmonary or cardiac congestion? When we do, I shall hope that tetanus may be cured.

In the mean time, as an encouragement to lay aside medicine and trust to nature and mild nourishment, I shall shortly relate the following case: — aged 12, October 8th, 1853, was amusing himself with some of his companions shouting at a marriage party. The bridegroom being irritated, threw a collier's boot among his tormentors, the heel of which struck this boy on the face. The skin was not wounded, but the bones of the nose were broken, and on the 13th, there were partially replaced by my friend, Mr. Tindal. On the 22d, fourteen days after the accident, and nine after replacement of the bones, tetanic symptoms appeared. I saw him on the 23d with Mr. Tindal, and found the pulse from 115 to 120, the lower jaw, face, and neck rigid, abdomen tense, with acute diaphragmatic pain. Purgatives, followed by small doses of Dover's powder, had been given. I proposed that the opiate should be omitted, that the violence of the spasms should be met by inhaling chloroform, and that infusion of digitalis should be freely given. The chloroform acted well, but he struggled against it, and did not like it; of the digitalis he had four ounces, and then refused to take more; purgatives would not act. Under these circumstances, at our visit on the 28th, we agreed to lay aside all medicine, to open the bowels by occasional enemata, to keep him quiet and give him as much milk as he chose to swallow. To avoid multiplying details, it is sufficient to say that for eight days the paroxysms recurred with great severity every twelve or sixteen hours, at times almost threatening immediate death; he had a troublesome cough with considerable expectoration, but otherwise he breathed easily, and swallowed well. He constantly kept a small wedge of wood between his teeth, notwithstanding which, the spasms of the lower jaw were so severe as to force out four of the incisors. He drank milk freely and without difficulty through a quill. He is now quite well. Cured by milk!

Change of Sight as Premonitory of Hard Cataract.—Mr. White Cooper (*Assoc. Med. Jour.*) differs from Mr. Ware and M. Sichel, in the explanation of the recovery of sight in those who have been presbyopic. Mr. Ware attributed the change to absorption of the vitreous humor, which allows the sides of the sclerotica to be pressed inward by the action of the muscles, the effect being to lengthen the axis of the eye, by which the aberration becomes corrected. M. Sichel believes there is in reality a shortening of the visual focus, caused by the use of too strong convex glasses. Mr. Cooper thus states his conclusion in regard to this interesting phenomenon:—

I have recently had the opportunity of studying four cases of this description, and have quite satisfied myself that, in them at least, the change from presbyopic to myopic sight was premonitory of hard cataract. I have observed that myopic persons, who become affected with cataract, increase the power of their glasses to the very highest numbers, even to No. 14. It is often considered that the need of higher and higher glasses under these circumstances is a delusion, and that the mere fact of the vision becoming more and more imperfect leads the patient to seek increased assistance in stronger glasses; yet, as the highest concave glasses diminish objects to almost miscroscopic minuteness, it was difficult to believe that they really afforded assistance. Observation has, however, led me to believe that the assistance was not imaginary; and the reason is probably this. In all cases of hard lenticular cataract, the crystalline lens becomes closer and denser in structure, and generally rather flattened in shape; but the flattening is in some cases less in proportion than the increase of density. By this increase of density, the refractive power is altered, and consequently the focal distance is shortened; so that a myopic eye, which formerly derived sufficient assistance from lenses Nos. 6 or 8, needs Nos. 12 or 14 for reading, or seeing moderately distant objects. To an analogous change I refer many of those singular cases in which old persons lay aside their convex presbyopic glasses, being able to do without them, or find themselves under the necessity of using concave or myopic glasses. The increase in density may be sufficient to counteract the changes which had previously diminished the refractive power, and to restore to the eye its natural focal distance; or it may go a little further, and cause the image to be formed in front of the retina as in near-sighted persons. Such a change in the density is not necessarily attended with so much diminution of the transparency of the lens as to materially interfere with vision, though I believe the sight is always a little impaired, which the patient properly sets down to the account of old age; but, in many cases, the change goes on; the lens becomes shrunken and amber colored; and the patient is sooner or later pronounced to have hard cataract.

The characteristics of the cases which I have seen have been these. A person, about the middle period of life, has taken to glasses, which have been increased in power as years rolled on. He has numbered perhaps seventy summers, when he finds the high powers less agreeable than the lower, which are resumed; but, after a time, they too, strain the eyes. Perhaps glasses are altogether laid aside, and the fortunate individual receives the congratulations of his friends on his renewed juvenility. In some cases, the sight is far from clear, and objects are held near the eyes to be discerned; accidentally, perhaps, he looks through a concave glass of low power, and is agreeably surprised at finding his sight improved. As these symptoms occur in advanced life, the persons may die before other phenomena present themselves, and the true nature of the case may never be discovered. But if the parties live, the sight, sooner or later, becomes little by little obscured, and the characteristic symptoms of hard lenticular cataract are established.

New Method of Administering Sulphate of Quinine.—In the *Revue Médico-Chirurgicale*, for September, 1853, we find a notice of an article by Dr. BERTELLA, on a new method of administering sulphate of quinine. This plan consists in combining with the quinine an equal quantity of tartaric acid, which has the effect of not decomposing the salt, but of rendering it more soluble, and of causing absorption to take place more readily. He gives at a dose three grains of disulphate of quinine, and three of tartaric acid. The dose at the commencement is from six to twelve grains of each.—*Assoc. Med. Jour.*

Fungoid Parasites of the Skin.—C. Meissner has described, in the *Archiv fur Phys. Heilk.* 12, 193, a new fungus, which he observed in the *finger-nails* of an old man. The nails were very thick, curved, yellowish white, and streaked; and, on examining them carefully under the microscope, they were found to be full of a rich plexus of variously convoluted filamentary fungi, which in many places formed a thick felt among the cells of the nail-substance. The toe-nails were unaffected.

When asked respecting the nails and the cause of their alteration, the old man stated that about thirty years previously a heavy weight had fallen upon his fingers, in consequence of which the nails were broken, and had come off; that they subsequently grew again, but had gradually become thick and white.

The last number of the *British and Foreign Medico-Chirurgical Review* contains an interesting review of M. ROBIN's *Natural History of the Vegetable Parasites which infest the Bodies of Animals*, in which mention is made of about two dozen of these organisms as occasionally found on the human body. We think that, for practical purposes, it will be enough to notice the following fungoid denizens of the skin.

1. In the true favus, well known by its yellow crusts, we have the now familiar *achorion Schönleinii*, the tubes and spores of which are found in the hair follicles surrounding the root of the hair, and passing out on the surface of the skin, where they form the familiar favous crusts of this 'porrigo scutulata.'

2. In ringworm of the scalp, or trichosis furfuracea (Wilson) we have the *trichophyton tonsurans*. The disease is distinguished by the bald patches being rough with the swollen and brittle stumps of the diseased and broken-off hairs; and the fungus, consisting of oval transparent spores and articulated filaments, is seated in the *interior* of the roots of the hairs. 'The hairs and fungi simultaneously increase; the

former seem larger than usual, are paler in color, lose their elasticity, soften and break off when they have risen some one or two lines above the surface of the scalp; in the short cylinder then left the fungus grows still more rapidly, so that the normal structure of the small stump of hair soon becomes indistinguishable. Sometimes the hair breaks off before emerging from the skin, and the fungus, epidermis, and sebaceous matter, fill the ends of the piliferous conduits, and form the little prominences which can be seen by the naked eye in this disease, and give the skin a rough anserine appearance. The sporules and mycelium of the plant can sometimes be seen in the form of a white powder, on the roots of the broken hairs.'

3. In porrigo decalvans, or alopecia circumscripta, is found the *microsporon Audouinii*, distinguished by its numerous waved filaments, and the extremely small size of its sporules. It is not found, like the Trichophyton, in the interior of the root, but forms round each hair a little tube; the hair then becomes opaque, softens, and breaks off. The alopecia is rapid, the dermis is not congested, and the epidermis is thin and smooth.

4. In mentagra grows a plant resembling the preceding, but possessing larger spores and filaments, ycleped the *microsporon metagraphyta.* Its seat is between the bulb of the hair and the follicle in which the bulb is seated; and it never extends beyond the surface of the skin.

5. The brown scurf of the disease called pityriasis versicolor, or chloasma, is formed by another cryptogamic plant, the *microsporon furfur*.

The essential point in the treatment of all these diseases is to destroy the vitality of the parasite, by means which are pretty equally applicable to all of them. If hairs be present, as in most of the maladies above described, they must be removed by extraction, with or without previous application of some of the usual depilatory ointments; and then some 'parasiticide' solution or ointment must be applied and rubbed into the skin, so as to reach the fungi in the recesses of the follicles. A solution of corrosive sublimate, two grains to the ounce; an ointment of acetate of copper, one grain to the ounce; and, above all, the saturated aqueous solution of sulphurous acid gas, diluted with two or three parts of water, may be used for this end. In cases of mentagra, we have found an ointment of sulphate of iron, ʒss to the ounce, completely effectual in curing the disease. There are no doubt many other substances which have a similar good effect; but a caustic such as nitrate of silver, which, by forming a crust on the surface, rather protects the fungus than destroys it, will not succed.—*Assoc. Med. Jour.*

SURGERY.

Observations on the Excision of Ovarian Tumors. By JOHN ERICHSEN, Esq., Prof. of Surgery in University College, London.—In considering the subject of ovariotomy, two questions present themselves. 1. As to whether the operation is a sound one, and ought to be retained in practice; and 2. If retained, in what class of cases it should be had recourse to?

In answering the first question, we must refer to the course that is taken by ovarian tumors, and to the result of the operation as deduced from published cases.

The course taken by ovarian tumors necessarily varies greatly. In some instances, these growths do not appear to be incompatible with prolonged existence and a fair share of health. In other instances, again, after remaining quiescent for some length of time, they assume considerable activity of development, and interfere so seriously with the other abdominal organs and with the general operations of the economy, that life is attended by great misery and discomfort; and in a third class of cases they rapidly and steadily run their course to an unfavorable termination.

After a time, in the majority of instances, the tumor may be materially lessened in bulk by tapping; but when once this operation has been had recourse to, it will require to be repeated with increased frequency, the intervals between each succeeding tapping being diminished; and then a fatal termination at a comparatively early date may usually be looked for. Mr. S. Lee states that of forty-six patients who were tapped, thirty-seven died, and only nine recovered; and that of the thirty-seven who died, more than one-half did so in four months from the first tapping, twenty-seven out of the thirty-seven in the first twelve months, and of these eighteen were only tapped once.

The objection has been raised against ovariotomy, that the mortality from it was so high as not to justify a surgeon in performing it. Undoubtedly, a very high rate of mortality after an operation would constitute a serious bar to its performance; and the more so, if it could be shown that the disease for which it was practised was not a necessarily fatal or even a very serious one. Thus, Mr. Phillips has collected the particulars of 61 cases in which ovarian tumors were extracted: of these, 35 were successful, and 26 died. Mr. Lee gives 90 cases; of these, 57 recovered, and 33 died; and Dr. Robert Lee, the most recent writer on the subject, has collected 102 cases of ovarian extraction, of which sixty did well, and 42 terminated fatally. From these statistics, it would appear that the mortality after the removal of ovarian tumors, amounted to rather more than one in every three cases. This rate appears to me not to be excessive, when we compare it with the result of operations for various severe surgical injuries or diseases.

The next question that occurs in connection with ovariotomy is as to the class of cases in which it should be practised. Now here we come upon ground in which much difference of opinion must necessarily exist. Ought ovariotomy to be performed in all cases, or even in the majority of instances of ovarian disease, or ought it to be limited to a few and exceptional cases, and practised as a last resource?

The most ardent advocate for this operation will scarcely, I think, advise that an attempt should be made to extract the ovarium from every woman laboring under tumor of this structure; but would rather recommend the employment of palliative treatment, until the growth had begun to interfere seriously with the comfort of existence, or with the healthy action of the abdominal organs. When these injurious effects of pressure have once fairly begun to manifest themselves, the patient wasting, suffering much discomfort from her size, with difficulty in breathing, repeated vomiting, gastric irritation, etc., then the question of relief by operation will necessarily obtrude itself, and must be discussed dispassionately and without prejudice. Under these circumstances, I confess I see no chance of giving the patient relief, or of prolonging her existence, except by the removal of the tumor. Medical treatment is of no avail in such cases, and tapping only gives temporary relief, and will eventually, and often very speedily, wear out or destroy the patient. Under such circumstances, therefore, we must either leave the patient to her fate, or have recourse to the ablation of the tumor, which, it has already been shown, may be done with the prospect of success in nearly two cases out of every three.

So far then as the strictly *surgical* aspect of this question is concerned, I should say that as the recoveries after this operation amount to at least 60 per cent., it is proper for the surgeon to propose and to perform it when all other means of relief have failed, and when the patient's health is giving way under the extension of the disease.

There is one aspect under which we have not as yet considered this matter, and which has a most important bearing on the operation. I mean in its *diagnostic* point of view. This, which may with justice be termed the *medical* part of the question, and may be considered as belonging rather to the province of the physician than to that of the surgeon, has to be considered in two of its bearings: 1. As to the existence of such adhesions between the enlarged ovarium and the other abdominal organs, as to render the extraction impossible; and 2. The diagnosis between ovarian and other abdominal tumors.

The existence of such adhesions between the ovarian tumor and the abdominal viscera, as will prevent the possibility of its extraction, is of frequent occurrence, having been met with in rather more than one third of the whole number of cases operated on; according to Dr. Lee, in 60 out of 162 cases. The frequency of the occurrence of this complication renders its diagnosis one of extreme importance. Its existence may in general be *suspected*, when it is ascertained that the patient has been the subject of attacks of peritonitis, when the abdominal tumor does not appear to change its position on the patient taking a deep inspiration, and then expiring freely; and when, on the patient's raising herself into the sitting posture, the sac does not tend to move forward into the space between the recti muscles. So also much light may be thrown upon this important point by ascertaining the existence of a crepitant or crackling sensation between the anterior abdominal wall and the tumor, and more particularly, if, when the tumor is tapped, it draws down over it the abdominal parietes, or sinks into the pelvis without exercising any traction on those parts. The condition also of the pelvic viscera—viz., the bladder and uterus—as ascertained by examination with the sound, may tend to show whether connexions exist in this quarter or not.

By such examinations as these, the presence of adhesion may doubtless in many cases be suspected; but in other instances, and more particularly when the mass is bound down posteriorly, there is no possibility of determining this point, and then the surgeon may, to his great annoyance, find that after laying open the abdomen, the operation cannot be completed, and the tumor requires to be left. In those cases in which there is any reason to suspect the presence of adhesions, it is, I think, a wise precaution to make a small exploratory incision into the abdomen, through which the fingers or hand may be introduced, and the connexions of the tumor examined. If these are too extensive to admit of removal, the aperture may be closed, and possibly the patient may escape without any very serious consequences ensuing; as in these cases the peritoneum has in a great measure lost its character as a serous membrane, and is not so susceptible of the diffuse and destructive forms of inflammation that would otherwise be likely to occur in it.

The diagnosis of ovarian from other abdominal tumors, falls so entirely in the province of the physician, that I do not feel myself prepared to enter upon it; but would prefer leaving that point to be elucidated by those members of the Society who have paid special attention to this subject.—*Assoc. Med. Jour.*

On the Reduction of Luxations of the Extremities when complicated with Fracture. Ry M. Richet. (*Bulletin de Therap.*) M. Richet relates, in great detail the case of a man, æt. 68, in whom a dislocation of the upper end of the humerus was complicated with fracture of the anatomical neck of the bone. Four days after the occurrence of the accident, he was placed under the influence of chloroform, and the reduction of the dislocation was easily effected by pressing backwards the head of the bone, without any traction being resorted to. The fracture was afterwards adjusted and consolidated; and when the patient was seen a year after, he had recovered the complete use of his limb.

M. Richet reviews the opinions of the classic writers, who agree in pronouncing the impossibility of reducing a dislocation of the humerus or femur, until after the fracture complicating it has become united. He shows the great power chloroform confers upon us in these cases, by the complete relaxation of the muscular resistance it produces, and the eare with which the head of the bone may, by due manipulation, be forced back into its socket. He thinks the passive obstruction offered by the fibrous tissues of the parts has been exaggerated and ill-understood. In numerous autopsies he has made after recent dislocations, produced accidentally or experimentally, he has always found the aperture in the capsule broad and irregular, and in no condition to offer an obstacle to reduction. He does not deny that such obstacles may occasionally be offered by the fibrous structures, independently of the aperture of the capsule; but he maintains, from clinical and experimental observation, that such obstacles are much more easily overcome by pressing the head backwards than by the usual practice of traction of the limb, which, indeed, only aggravates them. By the aid of chloroform, he believes a dislocation of the humerus into the axilla may thus always be reduced by pressing the head directly backwards. In several experiments that he has made, in which the head of the femur has been dislocated, and the bone then sawn through just below it, so as to simulate dislocation complicated by fracture, the reduction has also been easily effected by direct pressure.—*Monthly Journal.*

On the Cause and Treatment of Prolapsus of the Rectum. By M. Duchaussay. *Archives Générales de Med.* In a short but interesting memoir, M. Duchaussay reviews the circumstances attending this troublesome complaint, and fixes attention in particular upon the loss of power in the sphincter ani muscle as the chief cause of the descent of the bowel. Moreover, he endeavours to show that Dupuytren's operation, by excising the radiating folds of skin around the anus, and the operation by four touches with the actual cautery, practised by Guersant, act not by causing any subsequent retraction of the cellular tissue, skin, and mucous membrane, but rather by stimulating the sphincter muscle, so that it regains its contractility, and therefore its retentive character. How else, asks M. Duchaussay, do we explain the fact, that the prolapsus is often cured, or does not return after two days, or even after one day, or not at all, after the operation? He points out the fact, that in cases of this disease in infants, three fingers may sometimes be introduced without causing contraction of the sphincter, before the operation by cautery, whilst afterwards, if one be passed, a powerful contraction of the sphincter immediately ensues. As proof that this recovery of contractile power by the sphincter is the cause of cure, a case is mentioned in which M. Guersant had used the cautery too superficially, the sphincter failed to contract, and the disease returned. A second cauterization was followed, on the contrary, by return of the mucular contractility, and the cure was complete.

According to the author, the cautery acts as a stimulant to the paralyzed muscle, just as it will to the deltoid in a like condition. After pointing out the inconveniences and apparent severity of M. Guersant's method, M. Duchaussay suggests that a slighter cautery, or some other stimulant to muscular contractility, might act as well, and he suggests strychnine. This, with M. Guersant's permission, has been tried in the Hôpital des Enfants, in the case of a girl aged eleven years. The prolapsus here arose from obstinate constipation; it had lasted for four years; the bowel protruded at each evacuation about ten centimeters (=4 inches). During the first month of her admission she was treated by laxatives only, with no other result than that of diminishing the length of the protruded portion of bowel to about four centimeters (1½ inches). Strychnia was then employed endermically near the region of the sphincter; the next day there was no evacuation; on the following day the bowels acted once, only a slight bulging of the rectum taking place; on the third day the protrusion was still less after an ordinary evacuation; and during the next thirteen days it did not occur again.

Blisters were made in the cleft between the nates, and on the right thigh close to that cleft; one sixth of a grain of strychnia was applied the first day, one third on the second, and one third on the fourth day. On the fifth day, about half a grain of sulphate of strychnia was used, and this was repeated for the last time on the sixth day. In the case of a boy, it is recommended to be applied between the scrotum and anus, immediately over the anterior interlacement of the sphincter ani fibres. The remedy certainly deserves further trial.

Advantages of the Starched Apparatus in the Treatment of Fractures and Diseased Joints. By. J. S. Gamjee, Esq. The following notice of Mr. Gamjee's essay, for which the Council of University College have awarded the Liston Clinical Medal, we copy from the *Brit. & For. Med. Chir. Rev.*

This is a practical work, intended to show the beneficial effects of the treatment of fractures by the starched apparatus, as employed of late years by M. Seutin. This apparatus is very simple: splints are made from pasteboard soaked in water, and are then covered, both inside and out, with a thick coating of starch; the limb is bandaged with a roller covered with wet starch, and the splints are then moulded on the limb, all depressions and tuberosities in which are filled or protected with cotton-wool. An outer bandage, also covered with starch, is then applied, any the limb is kept quiet until the whole is dry, which occurs in about 36 hours. When dry, the bandages are slit up in order to see that the application of the splints has been properly performed, and if any swelling of the limb requires a little loosening of the bandage, or if any shrinking of the bandage requires a little tightening. This being done, a bandage starched on the outside is reapplied, and after this has dried, the patient may leave his bed. The great advantages of this plan are, that uniform pressure is applied, reduction is maintained, and confinement to bed for a long period (as common in fractures of the leg, thigh, and femoral neck, treated on other plans) becomes unnecessary. Mr. Gamjee also states that swelling from extravasation of blood, or from inflammation, need not prevent the application of the apparatus if it be judiciously used; and that if the fracture is a compound one, the only difference of treatment is that the wound may be left uncovered by cutting a piece out of the splint. In support of these assertions, 17 cases treated in University College Hospital are related, and some judicious remarks are attached to each. Without going into their analysis, or into the details of the manipulation required for each particular fracture, we may observe that the evidence, as far as it goes, is satisfactory.

PART FOURTH.

AMERICAN MEDICAL RETROSPECT.

PRACTICAL MEDICINE.

Statistics of Yellow Fever in Philadelphia in 1853. By WILSON JEWELL, M.D.—The whole number of cases registered from July 19 (when the first case occurred), to October 7, the date of the last case, a period of two months and nineteen days, has reached the total of 170.

An examination of the records of the Board of Health will show that the cases reported were not, in every instance, under the name of yellow fever; the greater part of them have been designated as malignant bilious, malignant, pernicious, typhus icterodes, &c.

The deaths have been 128, equivalent to 1 in every 1.42 hundredths, or 75 per cent. of the whole. A fearful mortality. Had every case that wore the aspect of a malignant type of fever been recorded, the list of cases would have been increased, while the percentage of deaths would have presented a more favorable appearance.

Of the 170 cases, 147 may be traced directly to the infected locality, or its immediate vicinity. Twenty-two are of doubtful or unknown origin; while, in one instance, that of Matthias Pettigrew, the disease was contracted at the Lazaretto station, where he had been at work on board the ship Caledonia Brander, from New-Orleans.*

One hundred and eighteen of all the cases reported were treated in private practice; twenty-four at the Pennsylvania Hospital; eighteen at the Blockley Hospital; seven at the Bush Hill, or City Hospital; and three at St. Joseph's, on Green Hill.

In no instance can it be shown that the disease has spread from those laboring under the fever. At the Pennsylvania Hospital, the yellow fever cases were intermixed in wards with numerous other patients, some ill, and others convalescing from disease, but not an individual, either among the patients, nurses, or visitors, contracted the fever. The like immunity was observed with the cases treated in the Blockley, St. Joseph's, and Bush Hill Hospitals. In private practice, although numerous cases were attended away from the infected portion of the city, we have yet to learn that the disease, in a single instance, was propagated from the sick to the well, although there was an unrestrained intercourse between the patients and their immediate friends.

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* This vessel had yellow fever on board when she arrived.

Ninety of all the cases were accompanied with black vomit; equal to 53 per cent. Of these, all died except four, viz., John Reehil, aged 20; Ellen Parr, aged 20; Mrs. Lindsay, aged 28; and James Sweeny, aged 12. The genuineness of the discharge in Ellen Parr's case has been doubted, as stated in a former communication. As black vomit has generally been considered to be a fatal symptom in yellow fever, we should always have some hesitation in relying upon the evidence of recovery after it has occurred, however high the authority from which the statement comes, unless the matter has been carefully submitted to the field of the microscope, and blood corpuscles found therein.

The sexes suffered nearly alike from the effects of the fever; the preponderance, however, being on the side of the males. Ninety-three of the cases on record were males, and seventy-seven were females.

A large proportion of those attacked were foreigners, viz., 102. Of these, 62 were born in Ireland, 19 in Germany, 18 in England, 1 in Scotland, 1 in France, and 1 in Spain. The remainder (68) were natives of the United States.

The colored population appear to have been specially exempt from the disease. We have not on record a single case, nor could we learn of any black person having had the fever. This supposed immunity of the colored race from attacks of yellow fever has been elsewhere observed; but in the fever of 1793, in this city, Dr. Rush says, "they took the disease in common with the white people."*

The duration of the attack in those who died was from two to twenty-four days. The mean was a fraction less than six days.

But few children appear to have had the disease. Under ten years of age there were only six. One of these, Rudolph Westhold, was but three weeks old. This child survived until the twenty-fourth day. Its father died on the sixth, and its mother on the fourth day of their disease. Another child, aged nine years, of the same family, recovered. William Hawkesworth, aged four months, died after one day's illness. It had nursed its mother until within two days of her death, she having died of the fever, at the Pennsylvania Hospital, on the sixth day of her attack.—*Quar. Sum. of Trans. of Col. Phy.*

On some Effects consequent on the Administration of Iodide of Potassium. By JOHN O'RIELLY, M. D. (*N. Y. Med. Gaz.*)—In August, 1850, I was called to visit Mr. H. E., aged twenty-nine, married; has a son two years old; has never had the venereal disease, or never took mercury to his knowledge; has been troubled for some time with chronic rheumatism, and has been ordered to take Hydriodate of Potash for its cure. Having taken the medicine for some days, he was attacked with symptoms of fever, and an eruption soon presented itself on his face, and subsequently all over his body. Maculæ first, of a dark red color, came out, which gradually got darker, until the spots resembled *purpura;* the cuticle next became raised over some of the spots, and was filled with a fluid of a purple color, constituting large bullæ an inch in diameter. On the cuticle giving way, the true skin was found sphacelated underneath; the patient was profusely salivated —his tongue was swollen, his frame was greatly debilitated, and nervous irritation harassed him very much. The case being an anomalous one, myself, the late Dr. Caldwell, and my learned and talented friend, Dr. Power, were requested to see it—and the truth is, it puzzled us. The patient's life seemed to be in imminent danger at the time, and although we were not perfectly satisfied as to the nature of the distemper, yet we adopted the proper treatment. The patient was directed to take strong broths, porter, milk punch, compound infusion of roses, with quinine, camphor combined with opium; and after the expiration of a month, he was convalescent, with the exception of the ulcers, which were healed in the usual way, and the patient was enabled to resume his business.

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* Rush's Works, vol. iii., p. 151.

On the 15th April, 1853, I was called to visit Mr. J. D., aged twenty-three; a clerk; married; has one child eighteen months old; has had syphilis previous to his marriage, for which he had taken mercury; has been addicted to habits of intemperance; has practised *masturbation* since his marriage; has been subject to attacks of rheumatism, for which he has taken Hydriodate of Potash; in the present attack has had a physician attending to him for nine days, who prescribed Hydriodate of Potash for him; states that in consequence of his medical attendant going to the country, he was obliged to send for me, on account of an eruption which suddenly broke out after a slight attack of fever. The patient at this time presented a most grotesque appearance, looking more like a leopard than a man; he was all mottled over with spots—those on his face were purple, whilst those on the lower extremities were of a dark red color; it will be remembered the spots on the legs came out last. There were two large bullæ on the forehead, one on the lip, two under the left clavicle, two on the inside of the right thigh, one on the side of the prepuce. The patient was profusely salivated, notwithstanding he had taken no mercury lately. After the lapse of a few days, the patient getting worse, and his life being menaced, Professor Mott was called in consultation, who declared, in the whole course of his vast experience, he never saw so bad a case. At this time the prepuce corresponding to the site of the bullæ had sphacelated, and the integuments of the penis, as far as the pubis, were involved in mischief. Mortification had also seized on the lip, and the other parts specified as having bullæ. The patient emitted a most abominable smell from his person; his mind was incoherent, his pulse was quick and small, the vital powers were prostrated to the lowest degree, every moment seemed about to snap the thread of his earthly career. Notwithstanding this terrific state of things, I ventured to predict the patient would survive, having arrived at the conclusion that it was similar to the former case; and fortunately my anticipations proved to be well formed The same treatment was fully carried out; the patient rallied, the eruption disappeared—first from the face, and afterwards from the lower extremities. The sphacelated parts were thrown off, *including the whole penis*, body and integuments, from the pubis, not leaving a vestige of it behind for any useful or sinister purpose. The patient is now in excellent health and spirits, fully contented, and not fretted at the loss he incurred.

Formulæ for Styptic Balsam. By James Warren, M. D.—It is nearly thirty years since I commenced the use of this balsam as a styptic, in the various forms of hemorrhage which are within the domain of medical pathology, and with uniform success. I am satisfied that no remedy now known exerts a more specific power and more speedy relief, especially in hemoptisis, hematemesis, epistaxis, and menorrhagia. It acts both by its sedative power, in diminishing the force of the circulation, and by its astringent qualities, in contact with the bleeding vessels. In the treatment of hemorrhage, neither blood-letting, confinement to the room, suppression of the voice, relaxation from business, nor other precautions are necessary; nor is any auxiliary treatment required, except, perhaps, a dose of Epsom salts, where there is evidence that blood has been swallowed.

Ordinary exercise in the open air is decidedly preferable to inaction; and wherever there are premonitory symptoms of a return of hemorrhage, it has always exerted a prophylactic power when promptly used; and by this early resort to the remedy, many radical cures have been effected.

The following is the formula and the method of using it:

℞ Acid. Sulphuric. (by weight), ʒ v.
Spts. Terebenth. } f ʒij.
Spts. Vin. Rect. *a a* }

Place the acid in a Wedgewood mortar, and add the turpentine slowly, stirring it constantly with the pestle; then add the alcohol in the same manner, and continue stirring it until no more fumes arise, when it may be bottled, and should be stopped with a ground stopper. It should be prepared from the purest materials; and when done, it should exhibit a dark but clear red color, like dark blood; but if it be a pale, dirty red, it will be unfit for use. The dose is 40 drops, and the method of using it is as follows:—Put a teaspoonful of brown sugar in a common sized tea-cup, and rub in 40 drops of the balsam until it is thoroughly incorporated, and then slowly stir in water until the cup is nearly full, when it should be immediately swallowed. This dose may be repeated at intervals of an hour, until three or four doses are taken, if necessary; and its use should be discontinued when fresh blood ceases to flow. After standing a few days, a pellicle forms upon the surface of the balsam, which should be broken, and the liquid below it used. It does not deteriorate by age, if tightly stopped.—*N. Y. Med. Times.*

SURGERY.

Case of Pulsating Encephaloid Tumor of the Occiput. By John Neill, M. D., Surgeon to Pennsylvania Hospital.—In the February, 1854, number of the *Medical Examiner*, Dr. N. reports the particulars of a very unique case. The patient, a man aged 70 years, had, for many years, a small, hard tumor upon the right of the back part of the head, which never pulsated or gave him any pain until ten months before death. The tumor was sixteen inches in circumference around the base. The skin over the tumor was stretched and reddened, but not hot or tender, and could be moved freely upon the parts beneath. There was no pain or uneasiness in the tumor, except a sense of tension.

It had a *pulsation* distinctly perceptible both to the eye and touch, accompanied by a marked *aneurismal bruit.* The pulsation was not a simple rising and falling of the tumor, but an expansion in all directions.

The right occipital artery could be felt beating strongly and with a distinct thrill. Pressure upon it sensibly diminished the pulsation of the tumor, and pressure upon both occipitals almost entirely destroyed pulsation.

There was no swelling of the glands in the vicinity, and no other tumor about the body. The pulse was regular—the radials were not ossified—and the sounds of the heart were natural.

He died at the Almshouse, and after the post-mortem had been made I had an opportunity of examining a section of the head containing the tumor; it had encroached upon the cavity of the cranium, through an opening with rough and jagged edges, of about three inches in diameter.

The dura mater was pushed into the cranium, and was closely connected by its external surface with the tumor. The internal surface of the dura mater seemed perfectly healthy.

Upon cutting into the tumor, it presented the appearance of encephaloid cancer. The larger part of the section was of that white kind which so much resembles medullary matter, and the remainder had a pinkish grey tint, indicative of greater vascularity. The interior of the tumor was intersected with numerous dense bands, and in the intervals were several small cysts containing fluid.

About one inch and a half from the tumor there had been disease and absorption of a portion of the parietal bone. The opening in the bone was one inch in diameter, and seemed to be so regularly circular on one side that it appeared to have been made with a trephine. The pericranium and the dura mater did not seem to be diseased, but between the two there was a reddish material, so soft that it was almost semifluid.

The microscopic examination of these products showed their true cancerous nature.

When the material of the tumor was first examined, the cancer cell was much obscured by oil globules, which were so numerous as to suggest the idea that the growth was undergoing fatty degeneration. The cells were pale, large, irregular in form, and frequently folded and wrinkled. The nucleus was very large.

Remarks.—The reader will probably be surprised at the manner in which the foregoing case terminated. There was certainly a great want of correspondence in the physical characters of the disease, and those revealed by the post-mortem examination. Here was a pulsating tumor, with perfect aneurismal pulsation and bruit; pressure on the occipitals interrupted the pulsation, and the ligature subsequently destroyed the pulsation and bruit completely. The impression that it was an aneurism was irresistible, and I thought that it was a diffused aneurism. Subsequently, however, to the operation the pulsation returned, and doubts began to arise as to its aneurismal nature, still there was no reasonable grounds for such suspicions. Under such circumstances, the attention of any one would naturally be directed to the possibility of its being a disease of the brain or dura-mater, which had worn an opening in the skull, and that the pulsation was dependant upon that of the brain; but, if such had been the case, the pulsation would not have ceased upon the application of a ligature to the artery. And, moreover, such extensive disease of the brain or its membranes could hardly have existed so long without producing some functional disturbance.

Then, again, the subject of pulsating tumors in bone and osteoaneurism would be brought to mind, but yet the position and characters of this tumor would not allow it to be included under this class of diseases.

The probability of its being cancer often occurred to me, but of course there could be no suspicion of its being a hard cancer or an osteo-sarcoma; and when, by feeling the tumor, the idea of a soft or medullary cancer was suggested, its pulsation, and the fact that that pulsation was once controlled by pressure upon an artery, at once counteracted the conclusion.

In fact, the case is a rare one. There is no record that I have yet seen of a *Pulsating encephaloid tumor of the occiput*, and on this account I have deemed the publication of this case as justifiable and useful.

Case of Tracheotomy, in Croup. By Prof. W. H. Van Buren, M. D.—The *N. Y. Med. Times* for Jan. 1854, contains a report of the proceedings of the N. Y. Medical and Surgical Society, in which we find that Dr. Van Buren reported recently to that Society "a case of croup, in which he performed tracheotomy, ten days before, and with very satisfactory results. The patient was a child five years old, and had been suffering with croupy symptoms about six days, before Dr. V. B. saw it. The obstruction to the respiration had been *gradually* increasing, and the breathing had at last become quite difficult, and paroxysms of suffocative cough were frequent. There had been, however, but little fever. At the second visit, the doctor found the pulse had arisen to 130, and the condition of the child threatening immediate death by strangulation. He accordingly opened the trachea, and inserted a tube thus giving immediate relief. Four hours after, the rapidity of the pulse had very much diminished, several pieces of false membrane had been discharged through the tube, and the breathing was comparatively easy. The case had steadily improved, and on the tenth day after the operation, the child was able to speak through the larynx. No medicine had been given since the operation. A single tube was first introduced, and afterwards a double one, with an opening in the convexity of the outer.

On the Internal Use of Chloroform. By HENRY HARTSHORNE, M. D.—The object of this article is chiefly to make some remarks upon its *dose* and *mode of administration.* Many practitioners within the writer's knowledge hesitate, from their recollection of its power as an anæsthetic, to give it in doses of more than a few drops; and as the drop is exceedingly small, such doses are really often insignificant. The writer can assert, from positive experience, that a fluidrachm of chloroform, taken by the stomach, is not more than equal, in soporific effect, to 30 or 35 drops of laudanum. In doses of 50 to 75 drops (about 15 minims), I have given it every half hour for several hours together. It differs from the opiate preparations in the promptness of its hypnotic action, the much shorter period of its duration, a less degree of cerebral oppression, and the absence of all stimulus to the circulation. It might be called a "diffusible narcotic," comparing in this respect with opium as ammonia does with alcohol. To produce much effect with it, repeated doses, at short intervals, will be necessary. The advantages which the above peculiarities afford in many instances of disease will suggest themselves to every physician. We may leave them to do so, proceeding to remark briefly upon its mode of administration.

The pungent property, already alluded to, causes it to require plentiful dilution, which is, of course, facilitated by the addition of some demulcent. Perhaps the *orgeat syrup* is the best. Every fluidrachm of chloroform should have at least two fluidounces of water with it when taken; and it will need, if in ordinary gum mucilage, considerable agitation to resuspend the particles immediately before swallowing. When taken in aqueous mixture alone, however, unless in very small doses, it produces nausea with some persons. This is entirely prevented by the addition of a strong aromatic, or, still better, by giving the chloroform in aromatic *tincture.* From the ready solution and kindred action of camphor with chloroform, their combination has become a very common one. For many purposes, however, a still better preparation is a sort of chloroform paregoric, or compound tincture of chloroform, *e. g.:* ℞. Chloroform fʒij; sp. camph. et tinct. opii, āā fʒiss; Ol. cinnamon. gtt. viij; alcohol fʒiij. M. et fiat tinctura. Dose, from 5 to 30 minims, or more, as required.

The most admirable effects have been witnessed from the administration of chloroform, as above combined, in malignant cholera. In the summer of 1849, my attention was first called to it while attending a very severe case of cholera with the late Prof. W. E. Horner. The prompt and signal restoration accomplished in that case, from a state of collapse, was evidently due to the exhibition by Prof. Horner, every five minutes, of a few drops of a combination of chloroform, oil of camphor, and laudanum, with ice, and warm frictions externally.—The writer's conviction was very strong that the *short interval* between the doses was an important item in the treatment; and in pursuing the same plan in a number of subsequent cases, several of which were of the most alarming violence, an extremely gratifying success was obtained. The opinion has thus been formed, that no other plan of treatment gives so much promise in the management of malignant cholera as a combination of powerful yet mild antispasmodics, such as above described, with ice, internally, and persisting external stimulation. It may be mentioned that the writer has added, with apparent advantage in a number of cases, sp. ammon., and occasionally creasote, in minute doses, to the preparation above designated as a compound tincture of chloroform. A formula of a very similar character is now quite extensively used as a gentle carminative and anodyne, or antispasmodic, and may be often substituted with benefit for the common paregoric.—*Am. Jour. Med. Sci.*

DISEASES OF FEMALES.

On the use of Sponge Pessaries. By Prof. A. P. Merrill, M.D. of Memphis.—The following remarks on the use of the Sponge Pessary we extract from the *Memphis Medical Recorder* for January, 1854. After citing cases, successfully treated by this pessary, Dr. Merrill says —"I have tried various plans of applying the sponge, all of which have been successful; but it may be that I have not yet fallen upon the best. The coarse and cheap sponge, cut into a globular form, of an inch and a half diameter, is sometimes used; sometimes pieces of a similar breadth, without regard to their shape; but, commonly, the patient is advised to provide some five or six fine sponges of a proper size, to be used in their natural state, without cutting. After clearing them of sand, and washing them in hot water, with soap, or in an alkaline solution, to soften them, each sponge is provided with a piece of twine, to facilitate its removal. This is passed through the sponge with a needle, so as to keep the smaller end downward. Before introduction, it is charged with thick lather of castile soap, or with elm mucilage, but it may sometimes be used without either. The frequency of renewal must depend upon the character and quantity of the vaginal discharge. If this is either profused or fetid, and during menstruation, the renewals should take place every two to four hours; otherwise, twice a day is sufficient. Under good management the relief afforded is striking and complete, and so little inconvenience does the sponge give, that the patient is rarely ever aware, from any sensation attending its use, even of its presence in the vagina. Any error that may be committed in the commencement, in the size of the sponges, will be likely to be corrected by the patient herself; but, in general, as the cure progresses the size may be reduced, and as this is done the sponge will recede higher up, and the walls of the vagina close beneath it with a healthy tonic contraction, which sometimes even increases the resistance in its removal. When this is the case, and the tone of the parts is well restored, with no greater amount of secretions than in health, a renewal of the application once in every twenty-four hours will answer every useful purpose."

Analysis of Sixty-seven Cases of Inversio Uteri. By S. B. HUNT, M. D.—The total number of cases which I find on record is *sixty-seven.* Of these, *twenty-one* were reduced and recovered; *thirty-three* became chronic; and *thirteen* died.

The number of the labor is mentioned in *twenty-three* cases: *Nine* occurred in the first labor; *seven* in the second labor; *six* are mentioned as multiparous; and *one* occurred after abortion, at the fourth month.

The degree of inversion is mentioned in *forty-one* cases: *Thirty-five* were cases of complete inversion; and *six* were mentioned as partially inverted.

The time at which the accident occurred is noticed in *forty-five* cases: *Nineteen* of these happened immediately on the delivery of the child; *eight* on attempting to remove the placenta.

The remaining *eighteen* cases occurred: *One,* after removing the placenta by the hand in the uterus; *one,* simultaneously with the first after pain, seventeen minutes after the expulsion of the child; *three,* half an hour after the delivery of the child; *one,* eighteen hours after labor; *three,* three days after parturition; *one,* on the eighth day; *one,* on the twelfth day; *one,* on the fifteenth day; *one,* on the tenth day; *four* are mentioned as occurring at unknown periods; and *one,* nine days after abortion at the fourth month.

The condition of the placenta is mentioned in *thirty-seven* cases: In *eighteen* of these it is mentioned as adherent; in *nineteen* it was removed either before the occurrence of inversion, or without recognizing the difficulty; in *ten* cases the placenta was intentionally detached when adherent.

The records as to hemorrhage are very imperfect.

In only *six* cases is the degree of hemorrhage *before* removing an adherent placenta mentioned: In *one* of these it was slight—this case was fatal; in *five* it was large in amount—one of these was fatal.

The degree of hemorrhage, *after* detaching an adherent placenta, is mentioned in *ten* cases: In *eight* of these it is mentioned as slight; in *two* it was dangerous—one of these was fatal.

Hemorrhage is noticed after removing the placenta as usual, or before the accident in *five* cases.

In *eight* cases it is spoken of in general terms.

Of *two* cases where the placenta was returned with the uterus in the operation of reposition: *one* had fatal hemorrhage; while in the *other* it was slight.

In *five* cases no hemorrhage occurred.

Convulsions occurred in *three* cases; all of which were fatal.

Syncope in *twelve* cases.

Syncope, without hemorrhage, in *one* case.

There were *thirty-two* irreducible cases. Of these, *five* terminated by spontaneous reposition; *five* by strangulation and gangrene, followed by recovery; *four* are recorded as successful cases of *ligation; six* are mentioned as "extirpated" successfully; and *four* cases of ligation were fatal.

It will be seen that *one in three and a half* of the cases operated upon, died. Of the *eight* cases remaining, there is no record except of the *two* already quoted as in comfortable health years after the accident. I shall quote somewhat largely from the histories of these operations.

Of the *four* successful cases of ligation, *two* were tied, supposing them to be polypi. These, of course, are to be considered merely as fortunate terminations of unfortunate blunders.

The third of these cases is reported by Dr. Usher Parsons, of Rhode Island, in the *Boston Medical and Surgical Journal*, vol. xiv, p. 511. It was a partial inversion of four years' standing. There had been great suffering from alarming hemorrhage, leucorrhœa, nervousness, and uterine pain. The tumor was ligated just below the point of stricture, at the os tincæ. Four days after, the operation was completed by the knife and scissors. It resulted in a cure.

Of the fourth and last case of successful ligation, I have no record beyond the mere fact of the operation.

Of the *six* successful cases of "extirpation," it is not stated whether the knife or ligature was used. One of these was extirpated on the fourteenth day after labor, by an English surgeon—a most unjustifiable and ignorant proceeding.

Of the *four* cases of unsuccessful ligation, *one* was ligated immedidiately after delivery, the uterus being mistaken for a tumour in which the placenta was implanted. On the eighteenth day after, she was admitted into Boyer's ward, at La Charité. Seven days after, the ligated portion came away, and she died a few days later.

Another case was also ligated by mistake, six months after inversion. She died five days after the operation. The *two* remaining cases died of peritonitis occurring after the operation.

Thus of *fourteen* cases in which surgical interference took place, *ten* recovered and *four* died. Of the *four* who died, the operation was performed in ignorance of the true condition of the parts in *two* cases —a fact which would have more weight were it not that *two* of the successful operations were also in the same category of surgical blunders.—*Buffalo Med. Jour.*

MISCELLANEA.

Annual Meeting of the American Medical Association.—The seventh annual meeting of the American Medical Association will be held in the city of *St. Louis, Mo.*, on Tuesday, May 2d, 1854.

The secretaries of all societies and of all other bodies entitled to representation in the Association, are requested to forward to the undersigned, correct lists of their respective delegations *as soon as they may be appointed*,—and it is *earnestly* desired by the committee of arrangements that the appointments be made at as early a period as possible.

The following are extracts from article 2d of the constitution:

"Each local society shall have the privilege of sending to the Association one delegate for every ten of its regular resident members, and one for every additional fraction of more than half of this number. The faculty of every regularly constituted medical college or chartered school of medicine, shall have the privilege of sending two delegates. The professional staff of every chartered or municipal hospital containing a hundred inmates or more, shall have the privilege of sending two delegates; and every other permanently organized medical institution of good standing shall have the privilege of sending one delegate."

"Delegates representing the medical staffs of the United States Army and Navy, shall be appointed by the chiefs of the army and navy medical bureau. The number of delegates so appointed shall be four from the army medical officers, and an equal number from the navy medical officers."

The latter clause, in relation to delegates from the army and navy, was adopted as an amendment to article 2d of the constitution, at the last meeting of the Association held in New-York, in May, 1853.

E. S. LEMOINE, M. D.,
One of the Secretaries, St. Louis.

PROF. JOHN C. DALTON.—We have received from the class of the College of Physicians and Surgeons of this city a series of resolutions highly complimentary of this gentleman, which were passed at the conclusion of his recent course of Lectures on Experimental Physiology in that College, and tendering him a silver box, containing a "roll of double eagles," as a token of their appreciation of his efforts to instruct them in this abstruse science by means of experiment. Complimentary as are these resolutions, and valuable as was the gift, they are by no means unworthily bestowed. In the attempt to introduce the method of teaching physiology, so successfully pursued by Bernard, into our medical schools and colleges, Prof. Dalton deserves great credit, and we are gratified to receive this testimonial of favor emanating from his class. In his note of reply he makes the following just observations:—"The time is past when the student of medicine could be required to accept scientific doctrines unsupported by evidence, or to repose a blind confidence in the *ex cathedra* statements of his teacher. The instruction communicated to him must be of such a kind as to satisfy the intelligence, and not merely to fill the memory with second-hand opinions. He must not only learn the facts of medical science, but must know also how they have been ascertained. Neither can the medical profession of the United States continue to be dependent, for the means of scientific progress, on the assistance of foreign countries. Independent investigation, if properly conducted, will accomplish here as much as it has done elsewhere; and the credit of the American name is to be sustained and exalted, not by depreciating the labors of foreign observers, but by emulating them."

Medical Journals. A new monthly medical periodical began its existence in this city with the present year, entitled the "American Medical Monthly." It is to be conducted by Profs. Horace Green, E. H. Davis, B. Fordyce Barker, R. O. Doremus, J. M. Carnochan, E. R. Peaslee, and E. H. Parker, and is under the editorial management of E. H. Parker, M. D., late of the New-Hampshire Journal. Much care is evinced in the preparation of its original, review, and editorial departments. This is the third monthly medical periodical which now represents the profession of this city, and we wish it all success in its high and honorable vocation.

As announced at the close of the second volume, the New-York Journal of Pharmacy has passed from the authority of the College of Pharmacy, and, at the commencement of its third volume, assumes an independent and individual existence. It is to be edited by Thomas Antisell, M. D., aided by Prof. Torrey, E. A. Kent, Dr. Enderlin, and B. Canavan.

We have regularly received the Medical Reporter, a quarterly journal, published under the direction of Chester County Medical Societies, Penn. The first number was issued July 1st, 1853.

Drs. F. G. Smith and J. B. Biddle have retired from the Medical Examiner, and Dr. S. L. Hollingsworth has succeeded to the editorial chair thus vacated.

The Stethoscope for January appears as the property and organ of the Medical Society of Virginia, edited by an association of physicians.

Medicinal Extract Works.—Our readers will observe that they are presented in this number with an illustration on steel of Messrs. Tilden & Co's. laboratory and gardens for the production of medicinal extracts. There are probably but few physicians in extensive practice who have not already become somewhat familiar with the quality and kind of these valuable auxiliaries to the successful practice of medicine. Since 1849, this establishment has been in successful operation, and produces annually from 10 to 15 thousand pounds. We are informed that there are under cultivation for the growth of material about forty acres, and that about thirty persons are constantly employed in the garden and factory. The products of this establishment, we are pleased to say, have fulfilled our most sanguine expectations; they have proved to be of uniform strength, and fully sustain the character which we gave them in our first notice in the 3d volume of the New Series of this Journal. That Messrs. Tilden & Co. have thus far been directly beneficial to the medical interests of the country, we have abundant evidence to believe, and we are pleased to see that, in addition to what they have already done, they announce that they are now prepared to furnish *fluid extracts* of a superior quality, and also blue mass of officinal strength.

State Medical Society.—Annual Meeting.—We regret that our crowded space does not allow of our presenting a particular account of the proceedings of this society at its annual convocation held in Albany on the 7th of February last. The session was one of unusual interest, and was characterized by much harmony and zeal for the great interests of medical science in this State.

OBITUARY.

DEATH OF DR. HESTER.—Died at his residence, in New-Orleans, on the 1st of December, 1853, Abner Hester, M. D., Editor of the *New-Orleans Medical and Surgical Journal*, aged about 40 years, of Cholera Asiatica.

It is with feelings of sorrow, that we perform the melancholy task of recording the sudden demise of one of our confrères. Death has invaded our ranks, and taken from us one who was in the ascendent—an ardent lover of medical science and literature. Dr. Hester, we learn, from an obituary notice, written by his most intimate friend Dr. Fenner, was born in Mecklenburgh County, Virginia, but had removed with his parents in early life, to Montgomery County, Tennessee, where he was brought up on a farm. At an early age, he displayed talents and ambition which induced his parents to bestow upon him what assistance they could in the way of a *good education*. At about sixteen years of age, he was sent to Cumberland College in Princeton, Ky., where he displayed all the requisites of a good student—was very generally esteemed, and prided himself on being well prepared for his recitations. After graduating at this college, he entered the office of Dr. Walter H. Drane, of Clarksville, Tenn., as a student of medicine. His preceptor at that time was considered one of the ablest physicians in the state, and commanded a large and extensive practice. After the usual preliminary course of reading, Dr. Hester attended two courses of lectures in the University of Penn. and graduated in the spring of 1837, having selected as his theme for a thesis "Emetics." Soon after graduating, he settled at Holly Springs, in North Mississippi, where he practised his professsion with much credit, until the fall of 1839, when finding his field too circumscribed for his ambition, he settled in 1841-2 at New-Orleans. It was here that he formed the acquaintance of Dr. Fenner. In 1843, almost discouraged by his slow progress in practice, he thought seriously of again changing his residence. Happening to attend, professionally, a sea captain, he was persuaded by him to go to Merida, in Central America, and had actually packed up his clothes ready for starting. He was disappointed; the captain did not call, and he was forced to renew his efforts for a living in New-Orleans.

In January, 1844, Dr. Hester, with his friend Dr. Fenner, both then in rather desperate circumstances, embarked in the enterprise of starting a medical journal. The success of this journal has been almost unparalleled in the history of periodical medical literature. In the spring of 1846 he was appointed surgeon to one of the three regiments raised by Louisiana for the Mexican war. From this time is dated the commencement of his rise as a practitioner. For seven years he had persevered in his efforts to get into practice, but had only succeeded so far as to make a bare support. Soon after his return from a three months' service in the war, he was elected Secretary to the Board of Health. In 1848 he was appointed, by the governor, a member of the Board of Medical Examiners for the Eastern District of Louisiana. He was appointed on several occasions Visiting Physician to the Charity Hospital. He was one of the Vice-Presidents of the Louisiana State Medical Society; and, at the time of his death, Port Physician of New-Orleans. As before stated, he was editor of the *New-Orleans Medical and Surgical Journal*, which still remains a monument to his untiring zeal and literary ambition. His sudden death in the meridian of his usefulness has caused a deep sensation among the members of the medical profession. That he was much esteemed by the public, is evidenced by the fact that he left an independent fortune to his widow.

Death of Dr. Cooke.—John Esten Cooke, M. D., died at his residence in Trimble County, Ky., on the 20th of Oct., 1853, in the seventieth year of his age. From the *Western Journal of Medicine and Surgery* we have gleaned in part the following particulars of the life of this original, and, in many respects, remarkable physician. Dr. Cooke's father having been a physician, his mind at a very early period was turned to the profession of medicine, in which, after having obtained a thorough collegiate education, he was carefully and thoroughly educated. At the age of 22, after complying with the requisites for graduation in 1805, he received the degree of Doctor of Medicine from the University of Pennsylvania. His thesis was entitled, "*An Inaugural Essay, being an account of the Inflammatory Bilious Fever which prevailed in the Summer and Fall of* 1804, *in the County of Loudon, Virginia.*" During the twenty years succeeding graduation, Dr. Cooke acquired an enviable reputation as a writer and practitioner of medicine. And so much attention had his writings attracted that, in 1825, he was elected president of the Med. Society of the Valley of Virginia, and in 1827 he was called to succeed Dr. Drake, who had retired from the Chair of Theory and Practice of Medicine in the medical department of Transylvania University. At this time he had made considerable progress in the organization of a medical school at Winchester, Va., where he resided, and where he had just published the first volume of "*A Treatise on Pathology and Therapeutics*," of which, in 1828, a second volume was published at Lexington. From Prof. Yandall we learn that "his first course of lectures was one of the most remarkable ever listened to by a class of medical students. Discarding all systems of nosology, Dr. Cooke presented a classification of his own. He had a theory which he believed explained the phenomena of almost every disease, and his lectures were taken up with an explanation of his theory and the practice founded upon it. The theory was a very simple one, and his practice as simple—that disease depends upon venous congestion, and is to be cured by remedies which act upon the liver. This is a statement of his views of the pathology, not only of fevers, cholera, dysentery, &c., but menorrhagia, dysmenorrhœa, and most of the complaints of females. A view of pathology so simple could not fail to be attractive to his pupils, and it is safe to say that few teachers have exerted a greater sway over medical theory and practice than was exercised by Dr. Cooke for many years in the valley of the Mississippi. In February, 1828, Dr. Cooke, in connection with Dr. Short, commenced the publication of the *Transylvania Journal of Medicine and the Associate Sciences.* In 1837, having left Lexington, he was appointed to the chair of Theory and Practice of Medicine in the Medical Institute of Louisville. In the spring of 1844, having previously retired to a farm on the banks of the Ohio, near Louisville, he vacated his chair in the faculty of the Medical Institute, and retired from the turmoils of a public to the enjoyments of a private life. Few men have ever entertained so undoubted a faith in the certainty of medicine. Simplicity and candor were ruling traits in his character. Honesty, perfect ingenuousness and unswerving integrity, marked his conduct on all occasions, and singled him out among men. He contributed largely to sustain our peridical medical literature.

DEATH OF PROF. CHAMBERLAYNE.—Died at his residence near the city of Richmond, Va., Lewis H. Chamberlayne, M.D., on the 28th of January last, aged — years. For sixteen years Dr. C. had occupied the chair of Materia Medica and Therapeutics, in the Medical Department of Hampden Sidney College, Richmond Va. He was one of the organizing members of the school. He was a graduate of the University of Pennsylvania of the class of 1817, having presented a thesis on "Intermittent Fever." He devoted himself with great ardor to his profession throughout a long and useful life. His lectures were characterized by much originality of thought, and his death is lamented by his numerous professional friends and the public.

DEATH OF DR. MCCLELLAN.—Samuel McClellan, M.D., died at his residence in the city of Philadelphia, on the 4th of Januray last, in the 54th year of his age. Dr. McClellan was the brother of the late distinguished Surgeon, Dr. George McClellan. He was for several years Professor of Midwifery in the Jefferson Medical College, and labored with great zeal and devotion, in the inception of this school, to sustain its interest. Laterly he had been wholly engaged in the discharge of the arduous duties of a general practitioner.

TO READERS AND CORRESPONDENTS.

WITH this number is brought to a successful close the twenty-second volume, and the eleventh year of the publication of the New York Journal of Medicine; and on this occasion we take pleasure in noticing the progress of the work in the favor of the profession—the many assurances which have reached us of the approbation of the profession upon our humble efforts. To boast of that progress and approbation is not our object, and it would illy become us, for we feel assured that it is owing more to the indulgence of a generous public, than to the merits of the work; still we would fain hope that this volume will be found not inferior to any of its predecessors. Of the fact that the means of enhancing the practical value of the forthcoming volume will daily augment, we can safely venture to predict, as we have the assurance of aid from sources hitherto not within our reach. But it is with indefatigable industry made manifest in every department of the work, that we hope to render this Journal still worthy of the flattering patronage with which it has recently been honored; and it is by performance, not promises, that we hope to maintain the confidence of our professional brethren and contribute our mite to the onward progress of the noble art of healing.

We claim the indulgence of several of our contributors; their papers, which are on file, shall receive an early insertion.

The Diseases of the Heart and the Aorta. By WILLIAM STOKES, Regius Professor of Physic in the University of Dublin; author of "The Treatment and Diagnosis of the Diseases of the Chest," &c. Philadelphia: Lindsay & Blakiston, 1854. 8vo, pp. 689. (From the Publishers.)

Homœopathy Fairly Represented. A Reply to Professor Simpson's "Homœopathy" Misrepresented. By WILLIAM HENDERSON, M.D., First American from the last Edinburgh Edition. Philadelphia: Lindsay & Blakiston, 1854. 8vo., pp. 302. (From the Publishers.)

On Rheumatism, Rheumatic Gout, and Sciatica, their Pathology, Symptoms, and Treatment. By HENRY WILLIAM FULLER, M.D., Cantab., Fellow of the Royal College of Physicians, London, &c., &c. New-York: Samuel S. & William Wood, 261 Pearl-street. 1854. 8vo, pp. 322. (From the Publishers.)

Elements of Human Anatomy; General, Descriptive, and Practical. By T. G. RICHARDSON, M.D., Demonstrator of Anatomy in the Medical Department of the University of Louisville, &c., &c. Philadelphia: Lippincott, Grambo & Co. 1854. 8vo, pp. 734. (From the Publishers.)

Lectures on the Diseases of Infancy and Childhood. By CHARLES WEST

M.D., Fellow of the Royal College of Physicians; Physician to the Hospital for Sick Children, &c., &c. Philadelphia: Blanchard & Lea. 1854. 8vo., pp. 487. (From the Publishers.)

History of the Epidemic Yellow Fever at New-Orleans, La., in 1853. By E. D. Fenner, M.D., President of the Louisiana State Medical Society; one of the Visiting Physicians of the New-Orleans Charity Hospital, &c., &c. New-York: Hall, Clayton & Co., Printers. 1854. 8vo, pp. 84. (From the Author.)

Tableau of the Yellow Fever of 1853, *with Topographical, Chronological, and Historical Sketches of the Epidemics of New-Orleans since their Origin in* 1796, *illustrative of the Quarantine Question.* By Bennet Dowler, M.D., Corresponding Member of the Academy of Natural Science of Philadelphia, &c., &c. (From the Author.)

A Report to the Indiana State Medical Society on Asiatic Cholera, as it prevailed within the State of Indiana during the Years 1849, 1850, 1851 *and* 1852. *With Observations on the Laws which govern its Progress.* By George Sutton, M.D. Indianapolis: Elder & Harkness, Printers. 1854. 8vo, pp. 67. (From the Author.)

A Report on the Health and Mortality of the City of Memphis, for the Year 1843. By Charles T. Quintard, A.M., M.D., Professor of Physiology and Pathological Anatomy in the Memphis Medical College. (Published by order of the City Council.) Memphis, 1854. 8vo, pp. 32. (From the Author.)

Constitution and By-laws of the Medical Association of Texas. Instituted Jan. 17th, 1853. *Incorporated by the fifth Legislature,* 1853–54. *Proceedings of the last Annual Meeting, together with the Anniversary Address, delivered by* George Cupples, M.D., November, 1853. Austin: Jo. Walker, Printer. 1854. 8vo, pp. 30. (From Dr. Cupples.)

The following Journals have been received in exchange:

The American Journal of Dental Science; edited by Chapin A. Harris, M.D, A. A. Blandy, M.D., and A. S. Piggot, M.D.; for April. (Quarterly. Philadelphia.)

The Peninsular Journal of Medicine and the Collateral Sciences; edited by E. Andrews, A.M., M.D.; for March and April. (Monthly. Ann Arbor, Mich.)

The American Journal of the Medical Sciences; edited by Isaac Hays, M.D.; for April. (Quarterly. Philadelphia.)

The American Journal of Insanity; edited by the Officers of the N. Y. State Lunatic Asylum; for April. (Quarterly. Utica.)

The American Journal of Pharmacy; edited by Joseph Parrish, M.D., and Wm. Proctor, M.D.; for March. (Bi-monthly. Philadelphia.)

The New-Jersey Medical Reporter, and Transactions of the New-Jersey Medical Society; edited by P. W. Butler, M.D.; for Sept. and Oct. (Monthly. Burlington.)

The Medical Examiner and Record of Medical Science; edited by F. G. Smith, M.D.; and John B. Biddle, M.D.; for March and April. (Monthly. Philadelphia.)

The Charleston Medical Journal and Review; edited by D. J. Cain, M.D., and F. P. Porcher, M.D.; for March. (Bi-monthly. Charleston.)

The New-Orleans Medical and Surgical Journal, devoted to Medicine and the Collateral Sciences; edited by B. Dowler, M.D.; for March. (Bi-monthly. New-Orleans.)

Southern Medical and Surgical Journal; edited by L. A. Dugas, M.D.; for March and April. (Monthly. Augusta.)

Buffalo Medical Journal and Monthly Review of Medical and Surgical Science; edited by Austin Flint, M.D., and S. B. Hunt, M.D.; for March and April. (Monthly. Buffalo.)

The North-Western Medical and Surgical Journal; edited by W. B. Herrick, M.D., and H. A. Johnson, M.D.; for March. (Monthly. Chicago and Indianapolis.)

Kentucky Medical Recorder; edited by H. M. Bullitt, M.D., and R. J. Breckenridge, M.D.; for March. (Monthly. Louisville.)

The Western Lancet and Hospital Reporter; edited by L. M. Lawson, M.D., and T. Wood, M.D.; for March and April. (Monthly. Cincinnati.)

The Memphis Medical Recorder; edited by Prof. A. P. Merrill, M.D., and Prof. C. T. Quintard, M.D.; for March. (Bi-monthly. Memphis, Tenn.)

The Medical Reporter; a Quarterly Journal, published under the direction of the Chester and Delaware County Medical Society; for April. (Quarterly. West Chester, Pa.)

Iowa Medical Journal, conducted by the Faculty of the Medical Department of Iowa University; for March. (Monthly. Keokuk, Iowa.)

The New-York Medical Times; edited by H. D. Bulkley, M.D.; for March and April. (Monthly. New-York.)

The New-York Medical Gazette; edited by D. M. Reese, M.D.; for March and April. (Monthly. New-York.)

The Boston Medical and Surgical Journal; edited by J. V. C. Smith, M.D.; March and April numbers received. (Weekly. Boston.)

The Western Journal of Medicine and Surgery; edited by L. P. Yandell, M.D, and T. S. Bell, M.D.; for March. (Monthly. Louisville.)

The Ohio Medical and Surgical Journal; edited by John Dawson, M.D.; for September. (Bi-monthly. Columbus.)

The Stethoscope and Virginia Medical Gazette; edited by ——; for March and April. (Monthly. Richmond, Va.)

Nashville Journal of Medicine and Surgery; edited by W. K. Bowling, M.D., and Paul F. Eve, M.D.; for March. (Bi-monthly. Nashville, Tenn.)

The New-Orleans Medical News and Hospital Gazette; edited by ——; for March and April. (Bi-weekly. New-Orleans.)

Nelson's Northern Lancet and American Journal of Medical Jurisprudence; edited by Horace Nelson, M.D.; for March and April. (Monthly. Plattsburgh, N.Y.)

American Medical Monthly; edited by E. H. Parker, M.D.; for March. (Monthly. New-York.)

The New-Hampshire Journal of Medicine; edited by George H. Hubbard, A.M., M.D.; for March and April. (Monthly. Concord, N. H.)

New-York Journal of Pharmacy; edited by Thomas Antisell, M.D.; for September. (Monthly. New-York.)

The Western Medico-Chirurgical Journal; edited by J. F. Sandford, M.D.; for March. (Bi-monthly. Keokuk, Iowa.)

The Journal of Psychological Medicine and Mental Pathology; edited by Forbes Winslow, M.D.; for January. (Quarterly. London.)

Dublin Quarterly Journal of Medical Science; edited by ——; for February. (Quarterly. Dublin, Ireland.)

☞ *August,* 1853, *number not received.*

Dublin Medical Press; edited by ——; for March and April. (Weekly. Dublin.)

The Medical Chronicle or Montreal Monthly Journal of Medicine and Surgery; edited by W. Wright, M.D., and D. C. McCollem, M.D.; [illegible] March and April. (Monthly. Montreal.)

The Upper Canada Journal of Medical, Surgical, and Physical Science; edited by ——; for March. (Monthly. Toronto.)

Monthly Journal of Medical Science; edited by ——; for Sept. and Oct. (Monthly. Edinburgh.)

☞ Communications intended for publication, and Books for Review, should be sent, *free of expense,* directed to Drs. Purple and Smith, Editors of the New-York Journal of Medicine, 183 Hudson-street, *New-York.* Persons at a distance may direct parcels, or exchanges (*paid*), as above, under cover, to M. J. B. Bailliere, Rue Hautefeuille, *Paris;* or H. Bailliere, 219 Regent-street, *London;* or Lindsay & Blakiston, *Philadelphia;* or Wm. B. Ticknor & Co., *Boston.* The attention of Correspondents is respectfully requested to the above, as the Publishers are frequently subjected to unnecessary expense for postage and carriage.

All remittances of money and letters on the *business* of the Journal should be directed to the Proprietors.

☞ Particular attention is requested to the above, as parcels, communications and exchanges have failed to reach us, owing to inadvertence, or want of attention to these notices.

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The Diseases of the Breast and their Treatment. By JOHN BIRKETT, Fellow of the Royal College of Surgeons of England. (The Dissertation to which the Jacksonian Prize for 1848 was awarded by the Council of the Royal College of Surgeons of England.) London, 1850. pp. 264. With Plates.

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A Practical Treatise on Inflammation of the Uterus, its Cervix and Appendages, and on its Connection with Uterine Disease. By JAMES HENRY BENNET, M.D., Member of the Royal College of Physicians; &c., &c. Fourth American, from the Third and Revised London Edition. Philadelphia: Blanchard & Lea, 1854. pp. 430.

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PART FIRST.

ORIGINAL COMMUNICATIONS.

Art. I.—*On Chronic Hydrocephalus, with an Account of a remarkable Case in which Paracentesis was performed, and on the Statistics of this Operation.* By George C. Blackman, M. D., Fellow of the Royal Medical and Chirurgical Society of London. [With illustrations.]

About the first of May, 1850, a child of Mr. P., of Newburgh, was placed under our care, for the treatment of chronic hydrocephalus. This child was six months of age; its body and extremities were well formed, but the appearance of its head is well represented in Fig. 1st. The circumference of the head was about thirty inches, and, when held between the eye and the light, it was perfectly transparent. The integuments were highly vascular at various points; and at its anterior and posterior portions there were bag-like protuberances, appearing as if about to burst from the pressure of the enormous quantity of fluid within. The health of the child was good, nutrition well performed, and, with the exception of the threatened rupture of the cranial coverings, there were no indications of immediate danger to life. The head began to enlarge very soon after birth, and continued to increase, until, when about four months old, during the night, the cranial cavity became suddenly nearly empty, whilst the integuments covering the entire body were distended as in anasarca. In the course of a few days, the latter completely disappeared, and the head regained its accustomed extraordinary size. In this condition we first saw it, and, as it would have been but folly to have held out an idea of cure, we proposed, by puncture, gradually to diminish the distention of the scalp, and to save the parents from the shock of witnessing the sudden death of their child, by the spontaneous opening which seemed not far distant. With a narrow bistoury an opening was made through the thin and distended coverings of the cranium, and about six or eight ounces of fluid were allowed to escape before the puncture was closed with collodion. The first tapping was done on the 6th of May, and, as no unpleasant immediate effects followed, another opening was made some two or three days afterwards, and, in the course of ten days, about two quarts had been evacuated. On the 18th of May, after a few hours of suffering, with symptoms of restlessness, vomiting, &c., the child died. After death, the scalp was freely laid open, and the fluid emptied from the cranial cavity, filling an ordinary-sized washbowl. There were no traces of cerebral substance to

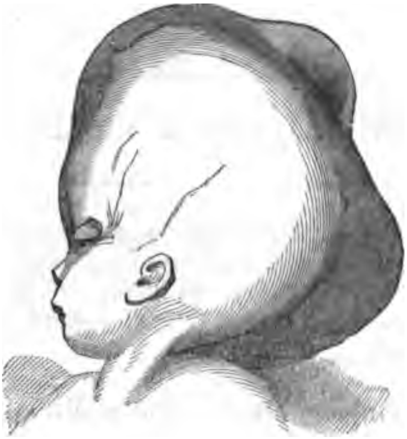

Fig. 1.

be found, but at the base of the brain the pons varolii and medulla oblongata existed of their natural size and shape.

Shortly after the period above mentioned, I drew up a more detailed account of this case, which was presented to the Orange County Medical Society, but, having lost this report, we have been compelled to furnish the above history from memory.

Dr. Glover has reported, in the *Philadelphia Journ. Med. & Phys. Sciences*, vol. ii., p. 159, a case of congenital hydrocephalus, in which he performed repeated punctures, and drew off in all eighteen ounces of fluid. The child died 110 days after the first operation, and eight after the last. In this case, the brain was nearly all absorbed; the portion remaining was not larger than a hen's egg.

Dr. Delafield communicated to the *Amer. Med. Recorder*, July, 1821, the particulars of a case in which Dr. Wetmore withdrew, in the course of eight days, 116 ounces of fluid. The child died on the ninth day after the first puncture, and it was found that the whole upper part of the brain had disappeared; at the base, there remained what appeared to be the pons varolii.

Dr. Remmett has recorded a case in the *Edin. Med. Commentaries*, vol. vi., part iv., in which the child died three months, nine days, after the first, and thirty-one days after the last puncture. Scarcely any brain could be found after death, but its enormous cavity was filled with clear water. The medulla oblongata, and a small portion of cerebral substance behind the orbits, were all that remained.

In the *Philosophical Transactions*, vol. xlii., there is the report of a case by Dr. Baster, in which a child affected with hydrocephalus died at the age of two and a half years. The cranial cavity contained 107 ozs. fluid, and there was no appearance of brain, but only a strong membrane, thicker in some places, and thinner in others. The ventricles together formed one huge cavity. While the child lived, the vital and natural actions were performed, but it seemed incapable of any animal action. It was constantly quiet and drowsy, without crying, was deaf, and died without any convulsion or apparent struggle.

These are all the cases we have been able to find, corresponding with our own, as to the almost complete disappearance of the cerebral substance. It certainly is remarkable, that with such extensive disorganization the child should be able to see, hear, taste, feel, &c., and yet this was true not only in my own case but in that of Dr. Wetmore. Transparency of the head, we believe, is not a common feature in this disease, though it has been observed by Butcher (*Gazette Médicale*, 1843), as well as in the patient which came under our care.

The sudden and spontaneous disappearance of the fluid after diarrhœa, copious perspiration, cutaneous eruption, and other salutary crises, has been noticed by M. Nelaton (*Elem. de Path. Chirurg.*, vol. ii., p. 642). Dr. J. W. Hubbell has reported in the *New-York Journal of Medicine*, May, 1850, p. 396, an interesting case of hydrocephalus terminating spontaneously in recovery, after the appearance of an eruption on the side of the head, which gradually spread over the whole scalp, and kept up a constant and free discharge for the space of two months. The head constantly diminished, while the body increased in size. In two months, the bones of the cranium had approached each other, but not united. In three months, the sutures had united, and the eruption disappeared. The child was fat, and in every respect healthy. —No medication was used at any time. Frank mentions a case which disappeared on the invasion of a scrofulous affection in another part of the body; and both he and Gölis have seen very favorable effects from the appearance of eruptions. In our patient the fluid was transferred to the cellular tissue, covering the whole body.

We have alluded to the perfect manner in which nutrition was performed; and instances are on record in which patients thus affected have reached upwards of thirty years of age. Prof. Vrolik has represented, in his magnificent *Tabulae Embryogennesin Hominis*, &c. (plate 38), the skull taken from a man, aet. 32, who died affected with internal hydrocephalus. This man "a prima infantia hydrocephalo laboravit, et cum eo ad satis provectam, quam dixi, aetatem pervenit, columnam dorsalem habebat curvatam. Inferioris corporis artus vix superioris pondus sustentare valebant. Ceteroquin erat sanus et nequaquam mente imbecillus." From the uniform and equal distention of the ventricles, this man's head appeared like that of a giant.

Rokitansky states (*Path. Anatomy*, Syd. Ed. vol. iii., p. 366) that, as a general rule, hydrocephalus is a symmetrical disease; and that its chief seat, in all its forms, is the lateral ventricles. When it is found in the arachnoid cavity, according to MM. Rilliet and Barthez (*Traité des Maladies des Enfants*), it is always the result of a hemorrhage from this serous membrane into its cavity; for it is in this variety that the fluid is generally found bloody.

The authors of the *Compendium de Chirurgie Pratique*, &c., *Tome Deuxième*, p. 537, remark that it is in these cases we sometimes meet with transparency; but, when seated in the ventricles, the latter, as in the cases related in connection with our own, and likewise by Ruppius, in Meissner's *Forschungen*, vol. iii., p. 240, may together form one huge cavity; and the cerebral mass around the ventricles, especially towards the top of the head, may, as stated by Rokitansky, and as observed in our own case, be so attenuated as scarcely to measure a line in thickness.

The substance of the brain is often compressed and atrophied, and occasionally it is lacerated at various points. Sometimes it becomes so expanded and so attenuated as to be with difficulty recognized. In some cases, doubtless, there is a close alliance between congenital hydrocephalus and hemicephalus, there being a decided arrest of development in the organum. "I believe," says Rokitansky, "that the really essential part of congenital hydrocephalus—that which arrests the development of the brain—is the affection of the ependyma; that, in proportion to the degree to which the hydrocephalus has advanced, and according to the period of fœtal life at which it commenced, it does, in various manner, and to different extent, arrest the development of the brain, and occasion monstrosity of it, and so far contains the ground of its alliance with hemicephalus, hydrencephalocele, singleness of the cerebrum (cyclopia), &c. (*Op. cit.*, p. 363.)

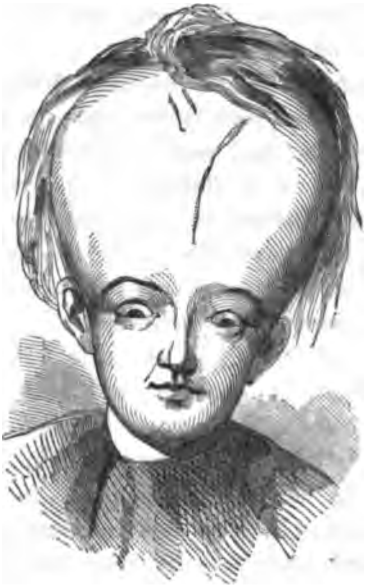

Fig. 2.

The diagnosis of hydrocephalus, though generally, is not always, unattended with difficulties. For example, in some cases the dimensions of the head, as in the cases observed by Gall, Gölis, Breschet, and Baron, are sometimes less than natural; and then, if the cranium be of unusual size, the latter may be owing to an hypertrophy of the brain. If paracentesis is ever justifiable in cases of hydrocephalus, in hypertrophy of the brain, it can only be productive of mischievous results.* Fig. 2 represents the head of a child some

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* Dean Swift, to use his own words,

"Gave the little wealth he had
To build a house for fools and mad," &c.

And in this same "house" in Dublin, about a century since, several insane

5 years of age, in which case we were consulted as to the propriety of an operation. From the history of the case, we learned that the head had commenced to grow rapidly shortly after birth, and that the child had never been able to sit or stand erect. Every portion of the cranium was of stony hardness, and with no amount of pressure with the fingers could we produce the slightest indentation. The patient was frequently affected with convulsions and other symptoms of cerebral disturbance, though nutrition was perfect, and the child fat and hearty. He constantly remained in the horizontal position with his head thrown back. Believing the case to be one of hypertrophy, not only of the brain, but of the bones of the cranium, we declined any interference.

In the *Brit. For. Med. Chir. Review*, April, 1846, we find the following attempt by M. Mauthnier to establish the differential diagnosis of hypertrophy of the brain and chronic hydrocephalus:—

HYPERTROPHY OF THE BRAIN.	CHRONIC HYDROCEPHALUS.
1. The posterior part of the skull first presents an unnatural prominence.	1. The forehead is the first part to present an unnatural prominence; the altered direction of the eyes, and the great width of the sutures, are also characteristic.
2. Children lie horizontally, or throw the head back.	2. Children lie on the belly, with the head lower than the body, and buried in the pillow.
3. Face puffy, eyes inexpressive or staring, mouth half open.	3. Countenance etiolated, with an expression of premature old age.
4. Functional disturbance comes on gradually, not before the period of dentition or weaning, and consists at first in affection of the respiratory apparatus.	4. Functional disturbance begins early, and involves the cerebrum from the beginning.
5. Patient fat and leucophlegmatic.	5. Patient ill nourished, subject to rickets and tabes.

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patients were trephined, on the supposition that their insanity was produced by the brain having become too large for the cranium!

In both affections the skull is commonly enlarged, but to the touch the sensation produced by pressure is widely different; in the one giving the idea of a solid, unyielding case, in the other of a wide separation of the bones, which in many cases are but imperfectly ossified. True, even in hypertrophy, where the progress of the disease has been very rapid, the sutures of the skull, in hypertrophy, may become loose and separate, particularly at the upper part of the head, but these cases are rare. Mr. Paget, in his *Lectures on Surgical Pathology*, Am. Ed., p. 64, remarks that it is very rarely that the due thickness of the skull is attained while its bones are engaged in the extension of their superficial area. "Hence, the weight of an hydrocephalic skull is not much, if at all, greater than that of the healthy one; a large parietal bone (No. 2 in the College Museum), measuring nine inches diagonally, weighs only four ounces, while the weight of an ordinary parietal bone is about three ounces." The extent of the skull, he asserts, is in a measure made up in some of these cases by the symmetrical placing of the wormian bones, thus showing "how the formative process, though thus thrown into straits and difficulties, yet conforms, both in growth and development, with the law of symmetry." This condition of the wormian bones existed in our own patient." Dr. Todd *(Cyclop. Anat. and Physiology)* observes that it is uncertain what the precise change is which the brain undergoes in hypertrophy, but it is probable that in this perverted nutrition, a new material is deposited between or in the proper anatomical elements of the brain, and that there is evidence of a similar condition of the cranial walls, the bones of the skull being preternaturally thick. The substance of the brain is universally firm, and cuts somewhat like cartilage.

To add to the difficulty connected with the differential diagnosis of chronic hydrocephalus and hypertrophy of the brain, these affections are found sometimes to coexist. Otto, indeed, asserted that hydrocephalus is occasionally cured by the supervention of hypertrophy of the brain, but upon this point Rokitansky observes (*op. cit.*, p. 359),—"I believe, further, that the hydrocephalus (the hydrocephalic process) may itself sometimes give the first impulse to hypertrophy of the brain; but that any compensation for or cure of hydrocephalus is effected by hypertrophy, appears to be altogether problematical. Such an opinion is founded upon the fact, that in some large skulls of hydrocephalic shape, the brain exceeds the normal size and weight. But I believe that these are cases in which the hypertrophy, having taken place in childhood, has continued ever since; and that belief is confirmed by the resemblance, in shape, which subsists between the skull in hypertrophy and the hydrocephalic skull, as well as by the difficulty which the similarity in the symptoms of hypertrophy and hydrocephalus imposes, upon our determining positively what disease of the brain did exist in childhood. So far as I am aware, the morbid increase in the volume of the brain in hydrocephalus, as well as its normal growth, takes place always in the neighborhood of the enlarged ventricles; it is a peripheral deposition around them; and the skull goes on increasing in size to whatever extent its closure may be prevented by the hydrocephalus."

The skull of Sir Walter Scott was found much thinner than natural after death, and this was supposed to have been caused by cerebral hypertrophy, although the immediate cause of his death was ramollissement of the corpus striatum, producing hemiplegia.

Dr. Forry, the original editor of the *New-York Journal of Medicine*, died Nov. 24th, 1844, from hypertrophy and induration of the brain. For some months before his death he suffered from epilepsy and other severe cerebral disturbance. The anterior and posterior portions of the skull, corresponding to the hypertrophied cerebral substance, were evidently thinned. Long-continued vascular excitement may lead both to hypertrophy and effusion. Dean Swift, who lived like a madman, and expired "a driveller and a fool," is said to have been temperate in early life, yet, by his intemperance in after years, he produced the hypertrophy of the brain and the effusion within the cranial cavity which, even at the age of 78, caused his death. Up to 1742, when he was 75 years of age, he showed no symptoms whatever of mental disease, beyond the ordinary decay of nature, nor did he have anything like epileptic attacks or general convulsions until some 36 hours before his death, yet we are informed (*Works of Swift*, Dub., Faulkner, 1763, vol. ii., p. 261) that Mr. Whiteway, who examined the body, "found much water in the brain." The frontal region of the cranium was thickened, flattened, unusually smooth and hard in some places, whilst in others it was thinned and roughened. At some points in the occipital fossae, the supraorbital plates, &c., the skull was so thin as to be transparent. (*Vide* Mr. Wilde's Report, &c., *Dub. Journ. Med. Science*, May and August, 1847.)

Hydrocephalus, therefore, is not a disease confined to any particular age, as is proved by the case reported by Prof. Vrolik, and that of the Dean, just mentioned. Besides these cases, Dr. West refers to another, in which the patient lived to 29 years of age; Dr. Baillie to one of 56 years, whilst Gölis mentions three in which it came on in old age, two of these patients having been upwards of 70 years old. Of course the changes produced upon the skull by chronic hydrocephalus, and hypertrophy of the brain, must vary according to the period of life at which these affections commence. In early life, as in Fig. 2, the cranial bones partake of the hypertrophied action of the brain, and becomes thickened as it expands. In adult life, the effect is different, the bones becoming thinner from the pressure, as seen in the skulls of Sir Walter Scott, Dean Swift, and Dr. Forry. But we have neither time nor space to dwell longer upon this part of the subject, nor could we do so with profit to the reader; for, from among all the writers to which we have been able to refer, we have not succeeded in collecting the elements by which an absolute differential diagnosis in all these cases can be established.

It is not our purpose to discuss the various methods of treatment which have been adopted in chronic hydrocephalus, but shall confine our remarks to puncture of the cranium. The Rev. Mr. Stevens has the credit of being the first to propose trepanning the cranium for hydrocephalus, and this was in the case of Dean Swift, who died in 1745. From Mr. Wilde's report of the Dean's case, to which we have already alluded, we learn that up to 1742, three years before the Dean's death, there were no symptoms of mental disease; and it was not until some 36 hours before his death, that he suffered from epileptic attacks and general convulsions. Conquently we may assume that it was in 1845 that the Rev. Mr. Stephens *proposed* this operation. Dionis, is his *Cours d'Opérations de Chirurgie*, 3d ed., 1736, has the following observations:

"Toutes les espèces d'hydrocéphale demandent la main du chirurgien pour donner issue aux eaux qui font la maladie. Les anciens appliquoient deux cautères potentiels, l'un sur le commencement de la suture sagittale, et l'autre sur la pointe de la suture lambdoïde; les escarres étant tombées, ils laissent sortir la lymphe par ces deux ouvertures, etc. Je suis plûtot pour les scarifications aux parties déclivés de la tête, par où les eaux, dont elle est abreuvée, peuvent suivre," etc.

He then refers to a case of congenital hydrocephalus, which he cured by this method of treatment. In the *Philosophical Transactions*, vol. xlvii., there is the report of a case in which Le Cat punctured the head for hydrocephalus. The operation was performed on the 23d October, 1744. A trocar with a canula much shorter than ordinary was used. On the upper part of the canula were two circles, each fastened to a different piece, so made as to screw on each other. The circles were somewhat concave on their surfaces, so as reciprocally to correspond, their circumferences touching while there remained a tolerable vacuity towards their centre. A circular piece of plaster, with a hole in its centre, was then applied to the lower circle, the screw of which passed through the hole of the plaster. The object of this arrangement was to prevent the trocar from penetrating too deeply. The trocar and canula were thrust up to the circles and plaster, which was made adherent to the scalp, after which the trocar was withdrawn, when 4 or 5 ounces of serosity, of a brownish white, "or the color of pale white wine," and somewhat foul, was allowed to issue. This was on the 23d October. On the 24th, he unstopped the canula, and drew off the same quantity. On the 25th, "the infant was ill," for which reason he was not disturbed on that day. On the 26th, he was better, and 5 ounces more were withdrawn. Tuesday he was suffered to rest. Whenever the fluid was withdrawn, the head was bound with a strong bandage. The child died on the night of the 27th. The brain was thin, expanded, in contact with the dura mater, forming a kind of thin sack filled with water. Both lateral ventricles were excessively dilated, and but slight traces of the pineal gland, choroid plexus, remained.

Dr. Remmet, of Plymouth, E., operated in 1778, and 80 ounces of fluid were discharged at five different operations. The child died on the seventeenth day.

In *Van Swieten's Commentaries*, vol. xii., p. 248, we find that Petit expressed his regret that all the patients who had been subjected to this operation died. He believed that if a large quantity of water should be drawn off, the patient must die in four or five hours after the discharge; and even if less should be removed, they would still die, though not so speedily, surviving, perhaps, the operation some forty hours, but never longer than this period.

The operation was condemned by Heister, Boerhaave, De la Motte, Paré, Portal, Richter, Gölis, Breschet, Boyer, Dupuytren, Physick. Among the modern opponents of this proceeding we have found none more decided than Dr. Battersby. In his very elaborate paper published in the *Edinburgh Medical and Surgical Journal*, July, 1850, he has most thoroughly entered into the examination of the pathology of this disease, and he declares that all the evidence thus far derived from morbid anatomy, as well as from the statistics collected upon the subject, goes to prove that puncture in chronic hydrocephalus is a useless and unjustifiable operation. In abdominal dropsies, as well as in hydrocele of the tunica vaginalis testis, he asserts, the simple withdrawal of the fluid is seldom sufficient to effect a cure; and if, in cases like these, he adds, where the containing parts naturally return to their proper position after the fluid is evacuated, it would be absurd to expect that dropsy of the brain, where the parts cannot reassume their normal position, should be cured by paracentesis of the head. The operation he regards as attended with danger, the cases reported showing that puncture is sometimes followed by an almost immediate aggravation of the cerebral symptoms, and by death. Another objection urged by him is that the fluid soon collects again, and even if relief be afforded by the first operation, it is less marked in the second, the quantity of fluid even increasing with its repetition. With this increase in the dimensions of the head, the body becomes emaciated; and death takes place from exhaustion, coma, or convulsions. The number of cases in which the operation has been performed is sufficient to settle the question of its value as a *curative* agent; and, while the statistics bear unfavorably upon it in this light, there can be no question that, as a palliative measure, the surgeon may not unfrequently be justified in resorting to it. Dr. Charles West published in the *London Medical Gazette*, April, 1842, "*An Inquiry into the Results of Puncture of the Head, in cases of Chronic Hydrocephalus*," and so completely has he exhausted the subject up to that time, that we are compelled to avail ourselves of his labors. His Table comprises 56 cases, and we have added such as we have been able to find reported since the date of his publication, a period of twelve years.

No.	Sex.	Age.	Duration of disease.	Symptoms before Puncture.	Size of the Head.	Number and date of Punctures.	Quantity of Fluid in lbs. and ounces.
1	—	b'tween 11 & 12 years	—	Came on in consequence of a fall; head enlarged to a third beyond natural size, and parietal bones opened so as to allow fluctuation to be felt. These symptoms came on three months after the fall.	A third larger than natural	One	lbvj. of water drained away in 20 days.
2	F.	4 m. 11 days	began in 6th weeek.	Began with fits and enlargement of head. Bowels torpid; strabismus; child had an idiotic look.	Apparently double.	Eighteen Dec. 10. 17. 25. 28. 31. Jan. 5. 9. 14. 19. 23. 28. Feb. 4. 8. 18. 25. Mar. 3. 6. 10.	oz. 1-8 + 5 + 4 + 5 1-2 + 4 + 4 + 7 + 7 1-2 + 7 + 2 6-8 + 10 + 3 1-2 + 0 + 0 + 5 + 3 + 4 + 4 = 76 1-4.
3	F.	12 wks.	began a few days after birth	General health good, but bowels irregular; strabismus, rolling of the eyes.	23 inches in circumference.	Four August 25. Sept. 4. 15. Oct. 5.	oz. 3 + 5 1-2 + 1 + 9 1-2 = 19.
4	M.	4 mths.	head large at birth	Child healthy, cheerful, not emaciated. The fluid was supposed to be external to the ventricles.	18 1-2 inches in circumference.	Eleven Jan. 8. 15. 23. Feb. 19. Mar. 15. 19. Ap. 19. 27. May 5. 17. Jn. 23.	oz. 1 1-2 + 2 + 2 + 2 1-4 + 1 1-2 + 2 1-4 + 1 1-2 + 1 1-2 + 2 1-4 + 2 1-2 + 2 = 21 1-4
5	—	14 m.	—	—	—	Nine within 4 months	Ojss. by first puncture, less by subsequent ones.
6	—	10 m.	excited from birth	Child very ill; pupils dilated. States that inflammation of the brain and its membranes existed, but does not mention a single symptom.	—	One	oz. 24.
7	F.	20 m.	began in 14th month	Head had been gradually enlarging for half a year.	—	One	oz. 2, but a large quantity, supposed to be Oij. drained away.
8	M.	5 mths.	congenital	Hiccough and vomiting; eyes heavy, somewhat convulsed.	Head of enormous size from birth.	Two beginning of Aug. Sept. 3	oz. 12 + 12 = 24.
9	F.	—	—	—	—	Five	oz. 55.
10	F.	—	—	—	—	Three	oz. 26.
11	F.	—	—	—	—	One	oz. 13.
12	F.	—	—	—	—	One	oz. 9.
13	M.	—	—	—	—	One	oz. 6.
14	F.	—	—	—	—	Three	oz. 31 1-2.
15	M.	—	—	—	—	Two	oz. 14.
16	M.	—	—	—	—	One	oz. 9.

Subsequent Progress.	Date of Report.	Authorities.
"Patent was saved."	—	Monroe on Hydrocephalus, p. 146, quotes the case from Prof. Rossi.
The fluid removed was clear first, but, on the 8th and 9th punctures, was of a darker color and thicker consistence, but regained its transparency at subsequent operations. The immediate effects of the puncture were never serious. Slight febrile symptoms, and occasional vomiting, and fretfulness, occurred at different periods, but fits only once, just before the sixth operation. The ossification of the head proceeded so that the situation of the first puncture became ossified.	Ninety days after first puncture, day of last puncture. Case then going on favorably.	Mr. Lizars, Ed. Medical and Surg. Journal, vol. xvii. p. 243.
The fluid was serous, on the second time was turbid and mixed with flakes of lumph. Slight fever after first, not after others. Ossification advanced; head diminished; child went on well; obscure fluctuation remained three weeks after last puncture. Calomel was then given, so as to affect the mouth.	Four months after last puncture, then stout, healthy, and very large of her age. Head ossified, except anterior fontanelle, and four inches less in circumference.	Mr. Russell. Ed. Medical and Surg. Journal, vol. xxxviii. p. 43.
After each operation there was great faintness, pallor, and failing of the heart's action during several hours. Great restlessness followed for a night or two after each operation.	Seventeen months after last puncture, child was healthy and head measured 18 3-4 inches in circumference.	Graefe. Graefe and Walther's Journal, Bd. xv. S. 348.
Great improvement followed the first puncture, the others left the child in a very satisfactory state.	Died of pneumonia more than a year afterwards.	Dr. Fourcade, Lancette Francaise, vol. iv. No. 47, p. 188, reports from recollection, case operated on by Dr. Bédor.
Iodide of potassium ointment employed; calomel and mild aperients given. "Though the little sufferer was for some time in a precarious state, he did recover, and is now a very fine boy, never having had the slightest return of the complaint."	—	Mr. Marsh, Medical Gazette, vol. xvii. p. 985.
One convulsion followed the puncture, and afterwards other symptoms of meningeal irritation.	Two and a half years afterwards health and intellect good.	Dr. Conquest, Lancet, March 17, 1838; and Med. Gaz., vol. xxi. p. 967.
Continued weekly during the day of puncture, but more lively than before, and for some time after the intensity of all the former symptoms diminished. A month after it was found necessaary to repeat the puncture.	Nearly eight years after, head then too large, but not larger than before the operation. Health good.	
—	Five years after, head 22 inches round; ossification complete, except posterior fontanelle, and two openings in coronal suture. Health good, remarkably shrewd.	
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No.	Sex.	Age	Duration of disease.	Symptoms before Puncture.	Size of the Head.	No. of Punctures.	Quantity of Fluid.	Immedi'te Effect.
1	M.	9 m.	Began at 3d month	Sucked well, but was emaciated.	At 8th month larger than head of a man.	One	1lb. Fluid continued to drain away afterwards.	—
2	M.	3 m.	Began in 7th week	Well nourished, but fretful.	Sutures separated.	Three	5 + 5 + 5 = 15	—
3	—	3 m.	—	—	Very large.	One	—	Bore operation well.
4	—	2 m.	Congenital.	Healthy and strong: head had much increased in size; eyes very prominent.	—	Five	10 + 12 + 14 + 12 + 32 = 80	—
5	M.	2 y.	Congenital.	Well.	25 inches round at 6th month.	One	—	—
6	F.	5 m.	Noticed at 5th month.	Indisposed for three weeks with crying and screaming. Pupils immovable.	Very large, fluctuating.	Six	9½ + 9½ + 6 + ¼ + 2½ + 1½ = 29¼	Sickness and vomiting after 2d; 4th puncture made in the fontanelle; 4½ oz. of blood escaped, and child seemed like to die.
7	M.	9 m. 20 d	Congenital.	Good, and continued so, notwithstanding fruitless employment of medicines; head hot, appetite craving.	23 inches round above tips of ears.	Ten	4⅛ + ¼ + 5 + 3 + 3½ + 3 + 3⅜ + 3½ + 4 + 2 = 40.	No striking effect.
8	M.	9 m.	Congenital.	Child had a spina bifida, but health good.	27 inches round	Three	10 + 16 + 14 = 40	—
9	F.	4 m.	Congenital.	General health good; head had progressively enlarged.	24 inches round.	Eight	12 + 12 + 12 + 9 + 12 + 3 + 9 + 12 = 81.	Very slight except after 5th puncture, when faintness was produced.
10	—	6 m.	Six or seven weeks after birth.	Always unquiet, but tolerable health to 5th week; became gradually emaciated; bowels irregular; constant crying, no sleep.	23 inches round.	1, but wound opened twice a day for sev'ral days.	116 in course of 8 days.	—

Subsequent Progess.	Date of Death.	Condition of the Brain after Death.	Authorities.
Child sank.	36 hours after the puncture.	—	Fabricius Hildanus, Observ. Chirurg. cent. iii. obs 17.
Well for two days, then taken ill: died on evening of 4th day.	84 hours after 1st, 36 after last puncture.	Excessive dilatation of ventricles; atrophy of pineal gland; very little trace of choroid plexuses.	Le Cat, Philosoph. Trans. v xlvii. p. 257.
—	Day after the puncture.	Fluid between cranium and dura mater.	La Motte, Traité complet de Chirurgie, tome i. obs. 115.
After third puncture, head reduced to natural size; after 1st week, head swelled again. Exhaustion came on 3 weeks after 5th puncture; death in ten days.	3 m'ths 9 days after 1st, 31 days after last puncture.	Cavity of brain full of enormous quantity of clear water; scarcely any brain found, but only medulla oblongata, and a small quantity of brain behind the orbits.	Dr. Remmet, Edin. Med. Comment. vol. vi. part 4
—	16 hours after puncture.	Two pounds of clear fluid contained in brain, in cysts, with vascular coats; cerebellum around fourth ventricle hard; cura cerebri ulcerated.	Dr. A. Monroe, Morbid Anatomy of the Brain, vol. i. p. 11.
More lively; convulsions; and hemiphlegia affecting right side, on third day after first puncture, ceasing in course of one day. Diarrhœa for some days. Coma before second and third punctures; relieved by the operation. Seemed bettter on day of sixth puncture; fits on following day; tranquil death soon after.	37 days after 1st, 1 day after last puncture.	Two pounds of sero-sanguineous fluid in ventricles; walls of ventricles very thin; brain soft; coagulum size of a hazel-nut in posterior corner of left lateral ventricle.	Mr. R. Brown, Med. and Phys. Journal, vol. li. p. 102.
Slight improvement followed each puncture. Continued well, except erysipelas of face, till day of last puncture; then, convulsions returning frequently, child wasting till death.	84 days after 1st, 11 after last puncture.	Dura mater thickened; pia mater inflamed; cerebral substance very thin, lined by false membrane; no trace of corpus striatum, callosum, etc.; bag of cerebrum divided into cells by membranous bands, contained 35 ozs. of fluid; cerebellum firm.	Mr. Money, Med. and Phys Journ., vol. lii. p. 462.
—	30 days after 1st puncture, 9 after last.	—	Mr Grey, Med. and Phys. Journ., vol. liv. p. 204.
Health good for a few days; considerable exhaustion after 2d puncture. On 5th puncture, 6 weeks after 1st, situation of original puncture ossified. Two convulsions before 7th puncture, again after 8th.	110 days after 1st, 8 after last puncture.	Fluid between dura and pia mater; the former thickened, but with no signs of acute inflammation; brain nearly all absorbed, not larger than a hen's egg, soft, and parts not distinguishable.	Dr. Glover, Philadelphia Journ. of Med. and Phys. Sciences, vol. ii. p. 159.
Seemed going on well, though fluid re-collected; head greatly diminished in size. sutures, which had been 3 inches across, came into apposition. On the 9th day, convulsions, coma, death.	9th day from the puncture.	Membranes gangrenous for several inches round puncture, contained 4 pounds of turbid, fœtid fluid; whole upper part of brain disappeared; some at base, like pons varolii.	Dr. Whitmore, American Me, Recorder, July, 1821.

No.	Sex.	Age	Duration of Disease.	Symptoms before Puncture.	Size of the Head.	No. of Punctures.	Quantity of Fluid.	Immedi'te Effect.
11	M.	7 m.	Began about a month after birth.	Fever; screaming; squinting at 3d week; in ten days enlargement of head, which increased; other symptoms abated.	21½ inches round.	One	6	Vomiting soon after.
12	M.	8 m.	Began in 3d month	Sickly from birth; convulsions at two months; emaciation; constant crying; strabismus.	21½ inches round	Five	14½ + 3¼ + 7 + 7 + 16=47 6-8	Uneasy during 1st, sensible of pain afterwards; uneasy and occasionally convulsed after 5th.
13	M.	11 w	Began in 6th week	Always fretful, throve till 6th week, then wasted; head swelled. No squinting.	Fluctuation in head distinct.	Six	6 by first, afterwards + 36=42	No inconvenience; sensible improvement.
14	M.	5 m.	Began at 2 months	Good for two months, but head always inclined to side; then swelling of head, fits of crying, cough, and emaciation. No vomiting or convulsions.	20½ inches in circumference.	One	11	None; head much collapsed; vomited same evening.
15	—	5 w.	—	—	Supposed to contain 2 to 3 pints.	Five	4 + 3 + 4 + 4 + 4=19	—
16	—	6½ m	Began in 4th m'th	Well nourished: general symptoms very slight.	—	One	37	Brain protruded through 1st puncture (with a lancet), which was therefore repeated.
17	F.	16 m	Began at end of 3d month	Began with convulsions; health then good until dentition began. then lost motion of left arm and leg; had fits with each tooth, and occasional strabismus.	26 inches round.	One	2½, and more drained from wound.	Considerable collapse.
18	F.	16 m	Began at 4th m'th.	Health bad; pupils dilated; insensible to light; coma for several months; occasional convulsions.	—	One	20	Cold, faint, lips livid, requiring strong stimulants.
19	F.	6 m. 3 w.	Began at 5th m'th.	Great strabismus.	18 inches in circumference.	Four	9 + 2 + 3 + 2½ =16½	No suffering.

Subsequent Progress.	Date of Death.	Condition of the Brain after Death.	Authorities.
First night restless; next night better; screaming 58 hours after, followed by fits; and death, in fit, 14 hours after.	72 hours after puncture.	No trace of inflammation; brain very soft; two transparent sacs in left ventricle, one in right communicating with third and fourth; they were smooth and tough, attached to brain at under, unconnected at upper surface; nates and testes formed a tumor, containing one drachm of pus; lower parts of brain healthy.	Mr. Hood, Ed. Med. Surg. Jour., vol. xvii. p. 510, Oct. 1821.
Slight convulsions on night after 1st puncture; improvement, less strabismus, increased ossification; cried much after 4th convulsions, and death 3 days after 5th.	51 days after 1st puncture, 3 after last.	No sign of inflammation; fluid in ventricles; brain greatly expanded; cerebellum healthy.	Dr. Freckelton, Ed. Med. Surg. Jour., vol. xvii. p. 240.
Relief after each puncture; a fortnight after last, water ceased to accumulate. No ossification of skull.	11 weeks after 1st puncture, 3 after last.	No sign of recent inflammation; 2½ lbs. of fluid in sac of arachnoid; atrophy of cerebrum which was not larger than a bean.	Mr. J. Sym, Ed. Med. Surg. Jour., vol. xxiv. p. 295.
Went on well till 3d day, head being 2½ inches smaller. On 3d day great restlessness, vomiting, rigidity of one arm, convulsions; death on 4th day.	87 hours after the puncture.	No inflammation of brain or its membranes; ventricles contained yellowish white fluid, like seropurulent fluid and water, with albuminous flakes; some softening of ventricles.	Dr. J. Alison, Ed. Med. Surg. Jour., vol. xliii. p. 359.
—	16 weeks after 1st, 5 weeks after last operation.	—	Mr. Callaway, as reported by Oppenheim, Rust's Mag., v. xxiv. p. 77
Pretty well, but somewhat excited 1st day; head filled again between 3d and 6th day; on 7th, a gush of fluid from situation of 1st puncture, followed by convulsions and involuntary dischage of urine and fæces.	9th day after the puncture.	—	Dr. Roechling, Hufeland's Jour., Aug. 1826, p. 114.
A little improved 1st night, pretty well till third day; then violent convulsions and death.	4th day after the puncture.	Brain bloodless; 2 pounds of fluid in ventricles; great thinning of their walls, of right especially, which formed a mere membranous bag, and was in parts of consistence of cream; parts at floor of left ventricle barely recognizable; at floor of right undistinguishable; cerebellum and base of brain healthy.	Dr. S. Hall, Med. Gaz., vol. vi. p. 334.
Slight fever for a few days, then seemed better. In 10 days water began to accumulate. In 1 month and 3 days symptoms of nervous debility, in 3 days more painless death.	5 weeks after the puncture.	No trace of inflammation; great accumulation of fluid in the ventricles.	Mr. Marsden, Lancet, Feb. 12, 1831. p. 648.
Vomiting on 2d and 3d day, fever on 4th, coma on 5th, convulsions on 6th.	6 days after puncture.	One pound of fluid in cranium; puncture had not penetrated the brain; dura mater adherent to skull; brain soft and very vascular; great distention of lateral ventricles with fluid; no inflammation about puncture.	Oppenheim, Rust's Mag. v. xxiv. p. 89.

No.	Sex.	Age	Duration of Disease.	Symptoms before Puncture.	Size of the Head.	No. of Punctures.	Quantity of Fluid.	Immedi'te Effect.
20	—	15w.	—	—	—	One	10	..
21	—	9 m.	—	Great emaciation.	30 inches in circumference.	One	10	—
22	—	2 m.	Congenital.	Health tolerably good—child intelligent.	23 inches in circumference.	Two	28	Improved appearance.
23	M.	4 m.	Began at 1 month.	Good, except frequent convulsions.	21 inches in circumference.	Seven	1½ + 2 + 6 + 11 + 15 + 12½ + 14=63.	None.
24	—	3 m.	Began at 1 month.	Health good, but bowels costive; had spasms when a week old, ceased after 3 weeks, when head suddenly enlarged.	—	Four	14 + 17 + 14 + 13½=58½.	Slight hæmorrhage from a vessel at 3d puncture.
25	M.	7 m 12 d.	Began at 2d month	Small-pox at 5th week; enlargment of head from 2d month; at 5th month blind; oscillation of eyes; starting and screaming, afterwards fits.	22½ inches round at 5th month.	Ten	4 + 5 + 6 + 7 + 12 + 16 + 12 + 28 + 42 + 20=153	After three of the punctures, faint and pale, and once vomited. Nothing after any of the others.
26	F.	10 d.	Congenital.	Good at birth; at end of ten days head hot; child fretful; bowels disordered.	Head at birth twice natural size.	Two	10 + 8=18	After 1st puncture cold, faint, as though about to die; state after 2d not mentioned.
27	M.	8 m.	Began at end of 4th m'th.	Health quite good up to 10th week, even now tolerably good; bowels regular; well nourished; eyes constantly rolling.	22½ inches in circumference.	Four	20 + 23 + 22 19=84	No peculiar effect.

Subsequent Progress.	Date of Death.	Condition of the Brain after Death.	Authorities.
—	—	All the ventricles formed but one large cavity, covered by but very little brain.	Ruppius, in Meissner's Forschungen, vol. iii. p. 240.
—	In a few days after the puncture.	—	Meissner, Die Kinderkrankheiten, vol. ii. p. 187.
Exhalat'n of sense of hearing, then improvement for 2 or 3 days; re-accumulation of fluid in a fortnight, gradual sinking after 2d puncture.	3 weeks after 1st puncture, 1 week after last.	Great vascularity of the membranes; softening of the brain; accumulation of fluid in the ventricles.	Mr. F. Cooper, Lancet, June 27, 1835, p. 405.
Convulsions ceased a few hours after 1st puncture; returned slightly before 3d and 5th. Health good till day before last puncture, then stupor; relieved for a time by puncture; 2 days after, quiet death.	115 days after 1st, 2 after last puncture.	Membranes pale, bloodless; septum lucidum torn; lateral ventricles formed one large sac, lined by thick flakes of matter, like pus or mucus.	Prof. L. A. Dugas, Amer. Journ. of Med. Sciences, vol. xx. p. 536.
Convulsions on 5th day; continued enlargement of head after each puncture; occasional convulsions, followed at length by coma and death.	62 days after 1st, 11 after last operation.	Fluid in ventricles; great thinning of the brain; hole through falx and tentorium; cerebellum healthy.	Dr. J. B. Withridge, Am. Jour. of Med. Sciences, vol. xx. p. 538.
Improvement for 2 months, and progressing ossification; then improvement ceased, and head became quite as large as ever.	131 days after 1st puncture, 2 days after last.	Arachnoid engorged; fluid in all three ventricles; brain very soft; lymph at is base.	Dr. J R. Smyth, Med. Gaz. vol. xxv. p. 83.
Convulsions came on, but ceased some weeks, till day before death, and child died in a fit.			
After 1st puncture, seemed improved; water re-accumulated at end of a week; after 2d, no improvement; at end of a fortnight after, head as large as before. Parents would not permit its repetition. Child wasted; died convulsed.	6 months 5 days after 1st, 5 months 12 days after last operation.	Fluid under dura mater; cerebrum so flattened that parts were undistinguishable.	Mr. Armstrong, Med. Gaz v. xxvi. p. 226.
Occasional vomiting; slight convulsions; head rapidly regained its size. 14 days after last puncture, moaning, crying, contractions of limbs, faintness, and difficult breathing came on.	7 weeks 3 days after 1st, 15 days after last operation.	Fluid within the membranes; left hemisphere almost totally destroyed, right greatly compressed; optic nerves diseased; left olfactory destroyed; right nearly so; cerebellum healthy.	Dr. Kilgour, Ed. Med. Surg. Jour., vol. liii. p. 365.

No.	Sex.	Age	Duration of Disease.	Symptoms before Puncture.	Size of the head.	No. of Punctures.	Quantity of Fluid.	Immediate Effect.
28	F.	9 m	Began in 3d month	Healthy; in 15th week able to hold up its head, though very large; cried occasionally; continued well to 9th month, but head then too big to move.	21½ inches in circumference.	One	4, much drained away.	½ oz. of blood escaped; 4 d'ys after, on passing a probe, 4 oz. of water.
29	—	8 m	Began at 4th m'th	Screamed very often; slight convulsions; occasional vomiting; distortion of eyes downwards.	—	Two	4 + 3=7	Improved appearance followed immediately.
30	—	7 m	Began at 2d month	Good health.	19 1-6 inchs in circumference.	Two	20 + 28½=48½	Pale, cried slightly after 1st; pale, did not cry after second.
31	F.	12 w 1 d	Began in 3d week.	Fits of crying a fortnight after birth continued to recur, but without convulsions or strabismus.	16½ inches in circumference.	Five	12 + 12 + 5 + 8 + 6=53	Crying ceased; child seemed more comfortable.
32	M.	—	—	—	—	Five	48½	—
33	M.	—	—	—	—	Four	45	—
34	M.	—	—	—	—	Two	20	—
35	M.	—	—	—	—	One	8	—
36	M.	—	—	—	—	Two	22	—
37	M.	—	—	—	—	Two	17	—
38	F.	—	—	—	—	One	7½	—
39	F.	—	—	—	—	Four	33	—
40	M.	15 m	Began at 5th m'th.	Inward fits from birth; emaciation at a fortnight; increase of head and fits at 5 mo.; general health improved until 14 months, then fits more frequent, and child wasted more; but appetite very good.	26 inches in circumference.	One	16	— Cried much; slight fit immediately after.
41	—	6 m	—	Comatose, moaning, pupils dilated, insensible; no strabismus.	20 inches round.	Five	10 + 10 + 10 + 10 + 10=50	Aroused in a marked manner after each operation.
42	M.	17 m	15 m.	Blind; pupils natural size, and sensitive to light; constant rolling of eyes; fluctuation of head; veins distended.	27½ inches round, 18½ over vertex from ear to ear.	One	20	No change.

Subsequent Progress.	Date of Death.	Condition of the Brain after Death.	Authorities.
On day after the escape of the fluid, slight convulsions, eyes less distorted, but child began to sink, whined, then threw its arms about.	6th day after puncture.	Some congestion of membranes; near puncture; brain quite white, very soft; ventricles immensely distended; cerebral substance seemed macerated, infiltrated with water; parts in ventricles undistinguishable; nerves at base soft; cerebellum large, soft; cavity in its centre; no trace of arbor vitæ.	Dr. Schaeffer, Casper's Wochenschrift, Aug. 19, 1837.
Evening of 4th day after first tapping, child grew dull; respiration hurried, and death took place before midnight.	4th day after 1st, 3d after 2d puncture.	—	Dr. Watson in Tweedie's Lib. of Med. p. 147.
After 2d puncture, cerebral symptoms came on, head being smaller. Head regained size in 10 days after 1st puncture.	24 days after 1st, 24 after 2d puncture.	—	Malgaigne, l'Expérience, Nov. 19, 1840.
Occasional fits for ten days after 2d puncture; then frequent screaming, and increasing weekness, without fits, till 2 days before death, when they returned frequently.	15 weeks after 1st puncture, 5 w'ks after last.	Twenty-nine ounces of clear fluid in ventricles, which were lined by a brownish mucus; septum lucidum thickened; small tubercle at decussation of optic nerves.	Dr. Coldstream, Edin. Monthly Journ. of Med. Sci. April, 1841.
—		—	Dr. Conquest, Lancet, March 17, 1838; and Med. Gaz. vol. xxi. p. 967.
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Daily fits for 4 days, with more sluggish condition than before. In 7 days, head as large as before the puncture, to the repetition of which parents would not consent; refused food; diarrhœa for 7 days; emaciation, increased weakness; death,	17 days after the puncture.	Seventy-five ounces of fluid in the ventricles, and infiltrated into brain, which was split up into layers forming several distinct pouches; the walls of these pouches were not formed by false membrane, but were all continuous with the corpus callosum, into which their fibres might be traced; cerebral substance at base had a jelly-like appearance; optic nerves much spread out; fluid infiltrated between fibres of cerebellum.	The writer.
Strapped head with adhesive plaster, fluid rapidly regenerated, no change of symptom.	6 weeks after 1st, soon after last operation.	Convolutions flattened; cerebral substance half an inch thick; pint of clear fluid in ventricles; no signs of inflammation from operation.	Dr. Parkman, Am. Journ. Med. Sci., Oct. 1848.
Fluid continued to flow from wound; on 4th day was more restless; spasmodic closure of hands; head more tense.	6th day after operation.	Hemispheres mere sacs, the parieties being an inch thick; convolutions obliterated; 4 pints turbid serum in ventricles; cortical and medullary matter lost where most distension; cerebellum, pons varolii and mudulla oblongata natural.	Dr. Pepper, Quar. Sum. Trans. of Col. Phys. and Surg., Phila., vol. iii.

No.	Sex.	Age	Duration of Disease.	Symptoms before Puncture.	Size of Head.	No. of Punctures.	Quantity of Fluid.	Immed'e Effect.
43	—	8 y.	—	—	—	One	32	—
44	—	3 m	3 m.	Head hotter than natural; nursed well; wakefulness at night; aversion to light; axes of vision formed an angle of 90° from pressure of fluid.	27 inches round, 15 over vertex.	Two	8 + 14=22	—
45	—	5 m	Congenital.	—	—	Two	4 + 6½=10½	—
46	F.	4 m	Congenital.	Head diaphanous; eyes rolling; pupils dilated; slight strabismus; no convulsions.	29½ inches round, 19½ ov'r vertex.	One	8	Fulse free; appeared better.
47	—	—	Congenital.	Obstruct'd labor; punctured head.	—	One	32	—
48	—	12 y	—	—	—	Nine	4 to 40 each time = 143	—
49	F.	9 w	7 w.	Drowsiness; in other respects well.	19¾ inches in circumference.	—	89 ozs.	—
					8 between March and Aug.			
50	M.	9 m	8 m.	Vomiting and drowsiness.	24 inches in circumference.	One	9 ozs.	—

Subsequent Progress.	Date of Death.	Condition of the Brain after Death.	Authorities.
Began to sink in a few hours.	36 hours after operation.	No injury to any part.	Mr. Taylor, Lon. Med. Gaz. 1850,
Applied compress and adhesive plaster; fluid continued to flow; bandage; urine more free; 12 days after operation child better, and continued to improve for about 6 weeks when fluid again began to collect; in two months 2nd operation, after which it failed gradually.	53 days after first puncture; 20 after last.	Strong marks of inflammation of meninges; brain a mere pulpy sac; with scarcely a trace remaining of parts usually found in cerebral dissections; cerebellum unaltered.	Dr. C. A. Lee, N. Y. Med. and Phys. Jour., vol. vi.
Went on favorably for several days; died comatose.	—	—	Mr. Chater, Prov. Med. and Surg. Journ., 1845.
Applied bandages; 2d day better; 3d day fever, head hot, convulsive movements; 4th day much better, no strabismus, movement of limbs and head free, no fever, appetite good, size of head diminished; 8th day improving markedly; took cold, died on 9th day of a bronchitis.	9 days after operation.	Fontanelles sunk; head 22½ inches round, 15½ over vertex; no signs of inflammation; cerebrum spread out like a sac, being ¼ of an inch thick, but of natural consistence; no convolutions; corpus callosum or septum lucidum found; base of brain normal.	Mr. Totlow, Lancet, p. 100, 1839.
Wound healed readily; child thrived for 23 days; had convulsions from re-accumulation of water.	23 days after operation.	No signs of inflammation; one quart of water in cranium.	Dr. Rose, Am. Med. Record, vol. 13.
Symptoms improved after 1st 6 operations; water rapidly re-collected each time in large quantities.	4 months after first operation	No marks of inflammation about wound.	Dr. Smyth, Miscel. Contribu. to Path. and Therap., 1844.
—	9 m'ths 1 w'k after 1st operation.	Lat. ventricles formed one cavity; absence of fornix, septum lucidum, corpus callosum and choroid plexus; corpora striata and optic thalami flattened; cerebellum soft; nerves all perfect.	Battersby.
—	6 days after operation.	Convolutions on upper surface obliterated; brain formed a large bag; central white parts absent, as well as corpus callosum, fornix, septum lucidum, fifth ventricle, and choroid plexus; optic thalami and corpora striata flattened, and of unnatural appearance; medulla oblongata, cerebellum, pons varolii, and crura cerebri, healthy and hard.	Battersby, Ed. Med. and Surg. Journ., vol. ii. 1850.

No.	Sex.	Age	Duration of Disease.	Symptoms before Puncture.	Size of the Head.	No. and Date of Punctures	Quantity of Fluid ℥ in lbs and ounces.
51	M.	8 m	6 m.	Fretful and feverish; diarrhœa and costiveness alternately; finally squinting and convulsions.	—	One	℥viij,of a reddish fl'id.
52	M.	14 m	6 m.	Tendency to coma; tremul'us eyelids; slow pulse; stertorous breathing; strabismus:	—	1, April 6.	℥xvi limpid.
53	—	—	—	Blindness; partial paralyses; face contorted; extremities placid.	23 inches round, 14 vertical.	Three	12 + 8 +

In relation to the first 16 cases in this table which are reported as successful, (and the same remarks are applicable to the three cases which we have added,) Dr. West very properly observes that chronic hydrocephalus is a disease usually slow in its progress, and intermittent in its advances, occasionally pausing for months, or even years, and then increasing without any evident cause; consequently, before any case be admitted as cured, it must be shown that a considerable time has elapsed since the operation, and that during this period the health of the patient has been perfectly good. The cases which he has collected he regards as affording but little encouragement to resort to it, as might be expected from the appearance frequently presented after death, as in many cases there exists serious organic disease or malformation of the brain itself, "though no symptom during life had betrayed the existence of a condition which mechanical interference could only aggravate."

Dr. Watson, on the other hand, employs very different language in reference to this operation. In his *Lectures*, p. 284, Amr. Ed., he remarks: "He must have been a bold physician who first proposed to decant the water from the brain, by means of a perforation, made with a trocar, through the membrane of the fontanelle, through the membranes of the brain, and through even the expanded cerebral substance itself. But the success of the project has amply vindicated

Subsequent Progress.	Date of Report.	Authorities.
Blood oozed from nostrils for 24 hours; bandage; gave aperients and nourishing diet; former symptoms gradually disappeared.	Seven years.	Dr. Edward, Monthly Journ. Med. and Scien., 1846.
Left wound open, and about 4 pints fluid gradually drained off, with gradual contraction of head and closure of open spaces.	Four months.	Mr. Kitsell, Prov. Med and Surg. Journ., 1849.
Paralysis disappeared; countenance natural; head diminished; sight returned; strabismus ceased; regained her natural playfulness.	Several months after operation died of typhoid fever.	Dr. Howard, Trans. Med. Journ., 1852.

this happy audacity. Though denounced as useless and cruel by some high continental authorities, by Gölis and Richter especially, it furnishes one of the best of the few chances of safety to the patient. Of course, I mean ultimate safety, for the operation itself is attended with the present risk of accelerating the patient's death. We have to consider that, by performing the operation, we incur the danger of abbreviating the existence of a being whose life without it could scarcely be long continued, or capable of enjoyment, but then we afford some chance of a perfect cure. A speedy death, or an uncertain life of mental and bodily imbecility, or complete restoration—these are the three events to be looked at. Had I to decide the painful question in reference to one of my own children, I would accept the alternative of probable speedy death on the one hand, or possible complete recovery on the other."

Malgaigne, after examining a great number of facts bearing upon this question, comes to the conclusion: 1st, that the operation may be tried when the patient is from three to four months old, and the disease appears to be stationary; 2d, after this period, when the disease is evidently increasing and threatens the life of the patient. (*Bull de Thérapeutique*, 1840.)

Dr. Copland observes, "While, therefore, I so far agree with those who argue for the operation, as to advise it to be tried after the measures I have detailed above have failed, yet I would not recommend its performance early in the disease: 1st, because medical treatment has then sometimes effected a cure, especially when the head has not been very greatly enlarged; and 2dly, because, when the fluid is in the ventricles, as it generally is in cases commencing after birth, a greater depth of brain must be penetrated to reach it at an early than at a later period." (*Dictionary of Practical Medicine*, vol. i., Am. Ed., p. 779.)

Dr. Charles A. Lee has advised a resort to puncture of the ventricles, even when to effect this object it is necessary to pass the instrument to a great depth. A puncture of the ventricles in cases like our own is not a matter of difficulty, as the distended ventricles formed together one vast cavity.

Dr. Joy, in the *Cyclopædia of Practical Medicine*, vol. ii., Lon. Ed., p. 478, thus expresses his opinion on the subject: "There are a few cases on record where it has appeared to effect a cure, and several where it has palliated the symptoms. In cautious hands, and where only a moderate quantity of water is drawn off at a time, it has rarely been attended with any danger. In cases where all other kinds of treatment have been tried without benefit, this is, perhaps, not altogether to be rejected."

Rilliet and Barthez, Barrier and Legendre sanction the operation only in cases of hydrocephalus arising from sanguineous effusion into the arachnoid cavity, a form of the disease by all authorities admitted to be rare. In cases of acquired chronic hydrocephalus, resulting from a cerebral tumor, or a profound alteration of the brain, they would not recommend it.

Mr. Fergusson regards the operation as worthy of trial, and relates several instances in which it has been performed by himself and his friends. He states that, although his own experience does not enable him to be very sanguine of great success from this proceeding, yet that which has been obtained by others is, in his opinion, a sufficient sanction for a continuance of the practice in all "favorable-looking cases." (*Practical Surgery*, 3d Lon. Ed., p. 556.)

Dieffenbach is strongly opposed to the operation, having, during the earlier part of his professional career, had three unsuccessful cases. Although success may in some few cases have followed it, yet on the whole he is disposed to consider them as fortunate escapes, like those which have been recorded in which a sailor recovered after a ship's anchor had passed through his abdomen, or the shaft of a cabriolet had pierced the thorax of a coachman, &c., &c., upon which cures a surgeon has no right to calculate. (*Operative Chirurgie*, Zweiter Band, Leipzig. 1848, p. 9.)

Dr. Battersby states that he is acquainted with ten cases in which the operation has been unsuccessfully tried in Dublin, and there can be no doubt that a large number of fatal cases remain, and will ever remain unknown. We have been informed by Prof. Stevens Parker, Dr. Watson, and others in this city, of several cases in which the operation has not averted a fatal termination. Still, we feel persuaded that, in cases similar to our own, and for the end proposed in this case, a surgeon would be justified in resorting to it.

Having thus noticed the sentiments of some of the most prominent authorities as to the propriety of resorting to puncture in chronic hydrocephalus, we would remark, in connection with the cases collected by ourselves and appended to the table of Dr. West, that they do not materially affect the conclusions to which this distinguished physician had arrived. In our own case, the operation was not performed with the expectation of effecting a cure. The very idea of the thing would have been perfectly absurd.

One word as to the proper instrument to be employed in this operation. Dr. Watson states, *op. cit.*, p. 286, that he once requested a surgeon to perform it upon a child, and, to their horror, when the trocar was withdrawn from the canula, "instead of clear serosity, a fine stream of purple blood spouted forth. We naturally thought it was all over with the child, which presently became deadly pale and faint. A verdict of *infanticide by misadventure* stared us in the face. But under the use of stimulants the child revived again; no hemorrhage went on internally, as we apprehended it would; but the child, after a day or two, seemed very much the better for the loss of the blood." The trocar "was not so delicate as it might have been," and it is probable, he thinks, that one of the larger superficial veins had been pierced; the opening having been made at a considerable distance from the longitudinal sinus. The trocar, therefore, in these cases, should be small, and should be entered perpendicularly to the surface; and, in order to avoid the longitudinal sinus and the larger veins emptying into it, it is advised to introduce it at the edge of the anterior fontanelle.

Dr. Conquest, who boasts of most extraordinary success in this operation, (*Lond. Med. Gazette*, March, 1838,) used a small trocar, introducing it through the coronal suture below the anterior fontanelle. In nineteen cases reported by him, ten are put down as successful! But, we think, if Dr. West's test of success, to which we have already alluded, were applied to these cases, many of them would be found wanting.

The punctures should not be made too frequently, nor should too large a quantity of fluid be withdrawn at once. As the cranial cavity becomes diminished in size, gentle support must be made with straps of adhesive plaster and bandages, and, if the child sink rapidly, resort must be had to stimulants.

Although it is not our purpose in this article to examine other methods of treatment in detail, such as compression, internal remedies, &c., we may in conclusion remark, that it is generally admitted by our best authorities that the plan pursued by Gölis, in cases not congenital or occurring shortly after birth, of administering calomel for a long time, and of the application of mercurial ointment to the head, which is kept constantly covered with a woolen cap, is quite as effectual as anything that has been proposed in the way of medication. To these means must be added the daily use of stimulating baths. In very obstinate cases he employed issues, blisters, or tartar emetic ointment to the head, and, under particular circumstances, leeches or cupping. A nutritious diet, mild diuretics, and diaphoretics are important adjuvants. Even when resort is had to the operation, these measures should still be continued, and, conjoined with compression, the patient will be likely to derive far greater benefit than if either method be trusted to alone.

Art. II.—*On Vaccination and the Causes of the Prevalence of Small-pox in New-York in* 1853–4. By Joseph C. Hutchison, M. D., Physician to the Brooklyn City Dispensary.

The subject of the present article is replete with interest to the medical inquirer, and of vast importance to the well-being of society. Its importance is at once manifest, when the startling announcement is made, that for the year ending March 1st, 1854, nine hundred and twenty-nine deaths occurred in the city of New-York, from a disease that is confessedly more under the control of man than any other of equal gravity; five hundred and fifty-two of which occurred during the last third of the year.* It is therefore a question for serious investigation, which I hope to conduct in a spirit of candor, and with an earnest desire to arrive at truth, What are the causes that have operated to produce the recent extensive prevalence of small-pox in our midst? If this can be satisfactorily determined, we may be enabled, to some extent at least, by removing the source, to obviate the evil in future. That it is not due to the want of the anti-variolous power claimed for vaccination, we have the most indubitable evidence, for there is no subject in the vast range of medical investigation supported by a larger cloud of evidence than the protective value of Jenner's discovery.

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* These statistics have been obtained through the courtesy of Dr. Hyatt, from the records at the City Inspector's Office, which are not yet published for the last year. The number of deaths stated includes those from varioloid.

Still, it is not *now* believed that it will ever be the means of utterly extirpating small-pox from the earth, (this opinion has recently been expressed by Dr. Tuthill in his valedictory address at the New-York Med. College,) because there are undoubted proofs of its occasional spontaneous origin. Four cases of this kind are reported by Wm. D. Purple, M. D., one by E. C. Banks, M. D., and two by the Editors of the *Phila. Med. Examiner*. (Vide *N. Y. Jour. of Med.*, vol. vii., N. S., 1851.)

In our investigation into the causes of the recent prevalence of small-pox, we have been led to the unexpected conclusion, that it is due, in a great measure, first, to the neglect of vaccination. The truth of this proposition is evinced by the large proportion of deaths that have occurred in children under the age of five years. It is a well-known fact, admitted by the most reliable authorities, that a death by small-pox in a *vaccinated* child is an exceedingly rare event. Indeed, Dr. Gregory of London, whose ample experience entitles his opinions to great respect, declared, in a discussion before the Royal Med. and Chirurg. Society, (reported in the *London Lancet*, March 8th, 1851,) "that cases of small-pox after vaccination, up to the *fifteenth year*, were very rare indeed."

The following Table exhibits the proportion of deaths under five years, in the city of New-York, to the whole number of deaths from small-pox and varioloid, for the five years ending 1st January, 1854:—

Year.	Total Deaths from Small-pox.	Deaths under Five years.	Percentage of Deaths under five.
1849	372	223	60
1850	241	147	61
1851	586	343	59
1852	516	383	74.2
1853	681	458	67.3
Totals	2,396	1,554	64.3

From these statements it appears, that of all the deaths from small-pox which occur in New-York, a fraction more than 64 per cent. take place under the age of five, or during the period in which it is allowed by all authorities that deaths after vaccination rarely occur. Hence, we must conclude, that this large per cent. of deaths took place in the unvaccinated, and there can be but little doubt that many of the deaths among older persons also occurred in the unprotected.

I have recently seen in the Small-pox Hospital on Blackwell's Island, through the kindness of Dr. Sanger, the resident physician, 13 boys, from nine to fifteen years of age, who had been sent there from the House of Refuge, with small-pox and varioloid, six or seven of whom had never been vaccinated. Dr. Parkinson, vaccine physician to the New-York Dispensary, has informed me that almost all the cases of small-pox treated by the outdoor physicians of that institution have occurred in those who have not been vaccinated. Dr. P. has also told me that about one-sixth of the individuals vaccinated by him are upwards of three years old; and as his vaccinations average 3,000 annually, it will be seen, that at this institution alone, 500 children, more than three years of age, are presented every year, who have been exposed unprotected to the ravages of the small-pox.

Further evidence of the neglect of vaccination is afforded by a comparison of the mortality from small-pox, in those countries where it is made compulsory by legislation, with the mortality in New-York, and other places, where no such regulation exists. The following tables, extracted from the *Report on Small-pox and Vaccination* made to the London Epidemiological Society, March 26, 1853, exhibit the results of these opposite modes of treatment, which are of so much interest that they are presented entire:—

(A.)—Table showing the mortality in various places in *England*, *Scotland*, and *Ireland*, from small-pox, as compared with the total mortality, for ten years, ending 1850 or 1851:

	Deaths from Small-pox.	Deaths from all Causes		Deaths from Small-pox.	Deaths from all Causes
London	16. per	1,000	Greenock	34.6 per	1,000
Birmingham	16.6	"	Glasgow	36.	"
Leeds	17.5	"	Dublin	25 66	"
Paisley	18.	"	Cork	39.5	"
Edinburgh	19.4	"	Galway	35.	"
Liverpool	21.	"	Limerick	41.	"
Dundee	24.2	"	Connaught } 10 yrs. endg. 1841	60.	"
Perth	25.	"	All Ireland } 10 yrs. endg. 1841	49.	"
England and Wales (8 years)	21.9	"			

(B.)—Table showing the mortality from small-pox in various countries in which vaccination is directly or indirectly compelled, as compared with the total mortality for various periods, stated in the "Tables exhibiting the Mortality from Small-pox in various Countries" at the end of this Report:

	Deaths from Small-Pox.	Deaths from all Causes.		Deaths from Small-Pox.	Deaths from all Causes.
Westphalia	6 per	1,000	Trieste	5.15 per	1,000
Saxony	8.33	"	Bohemia	2.	"
Rhenish Provinces	3.75	"	Lombardy	2.	"
Silesia (Prussian)	5.25	"	Venice	2 2	"
Pomerania	7.75	"	Sweden	2.7	"
All Prussia	7.5	"	Bavaria	4.	"
Lower Austria	6.	"			

The following table, compiled from the annual reports of the City Inspector, exhibits the average of deaths from small-pox, out of every 1000 deaths from all causes in the city of New-York, for periods specified, from the year 1805, when the first report was made, to the end of 1853. It will be observed that the mortality from small-pox here, where vaccination is also voluntary, coincides generally with the results observed in Table A:

———	Deaths From Small-pox.	Deaths From all Causes.
For the 10 years ending 1815,	18.7 per	1,000
" " 10 " " 1825,	22. "	"
" " 10 " " 1835,	18.5 "	"
" " 10 " " 1845,	21.4 "	"
" " 9 " " 1853,	25.4 "	"

The highest ratio of deaths from small-pox in New-York occurred in 1824, when it amounted to 96.3 per 1,000 deaths from all causes; in 1853 the ratio per 1,000 was 32.23, which has been exceeded nine different years since the first report was made.

An inspection of the above tables reveals the significant fact, that, in those countries where vaccination is made compulsory, the proportionate mortality from small-pox is considerably less than half what it is where it is entirely voluntary, as in our own commercial metropolis. It must be borne in mind, that in many of the countries comprised in the second table, where vaccination is enforced by direct compulsion, by fine, &c., the public vaccinations occur but once a year; it necessarily happens that a number of the children are several months, or even more than a year old, before an opportunity is offered them of being vaccinated; and in those states where vaccination is only indirectly compelled, by making it an indispensable preliminary to admission to public schools, alms-houses, orphan asylums, &c., it may be deferred many years. The importance of this consideration is very obvious, when we remember that in England and Wales the proportion of deaths from small-pox under one year is 25 per cent., and in Paris considerably upwards of 14 per cent., and there is but little doubt, if proper regulations existed with regard to the age at which the operation should be performed, in the countries where it is directly or indirectly compulsory, the mortality might be still farther reduced. In proof of this statement, we are informed by Dr. Watson, in his valuable lectures, that, in Denmark, "Variola had at one time disappeared before the defensive influence of compelled vaccination;" but that "chance and a careless security, engendered by the absence of the pest, have led to its re-introduction there."

In view of the facts which have now been presented, is it surprising that, fifty-eight years after the discovery of vaccination, which was justly hailed as the greatest boon ever bestowed on man, we find small-pox committing such fearful ravages in our midst? Indeed, is it not rather a matter of wonder that small-pox is not more prevalent? And what stronger evidence do we require than has been offered of the reckless neglect of vaccination, and of the great importance to society of making it compulsory?

The causes which induce this inattention to vaccination are ignorance and apathy, as well as the prejudice of some, who, without a sufficient examination of the facts, regard it as an inefficient safeguard. If they have seen one case, and heard of several others who have been vaccinated, and subsequently contracted small-pox, this is deemed ample evidence of the worthlessness of vaccination. Such individuals might, with the same propriety, abjure quinia as a remedy for ague, because it occasionally fails to arrest the disease. A melancholy instance of the effect of prejudice against vaccination has recently occurred in New-York, and was related to me by my friend Dr. Purple. A lady, who had no confidence in the protective power of vaccination, purposely exposed her children (four in number) to the contagion of small-pox, in order that they might have the disease at once, and thus relieve her from future anxiety. The calamitous result was, that three died, victims of the folly and prejudice of their doting, but deluded parent

A second cause of the recent prevalence of small-pox is imperfect vaccination. Such unfortunately has been the want of attention to this important subject, that the salutary cautions of Jenner have been overlooked or entirely disregarded, and it has become a matter of importance, again briefly to call attention to them. It may result (1) from not observing the regular progress of the vaccine disease. Unfortunately, the opportunity of watching every stage of vaccination, which is absolutely necessary in order to arrive at correct opinions upon the case, is often denied to medical men; but this, which is unquestionably one of the fruitful causes of small-pox after (supposed) protection, might be obviated to a great extent, if the family physician would exercise his influence in impressing its great importance. If the insertion of lymph into the arm is followed by the development of a vesicle, or even an ulcer, the unprofessional are often ready at once to conclude that cow-pox has been produced, and that the attention of a medical man is not longer necessary, when in truth no one, who is not thoroughly and intimately acquainted with the disease, is competent, or should be permitted, to decide so important a question. The illustrious author of vaccination, at an early period of its history, enforced, by frequent admonition, the necessity of a *particular* knowledge of cow-pox to the vaccine inoculator. "He should not only be acquainted with the laws and agencies of the vaccine virus on the constitution," says Dr. Jenner, " but with those of the variolous also, as they often interfere with each other. A general knowledge of the subject is not sufficient to enable or to warrant a person to practice vaccine inoculation; he should possess a particular knowledge; and that which I wish strongly to inculcate, as the great foundation of the whole, is an intimate acquaintance with the character of the true and genuine vaccine pustule (vesicle); the spurious pustule (vesicle), would then be more readily detected, whatever form it might assume, and errors known no more."

In our public vaccine institutions, it is customary to examine the vesicle but once, (and this is frequently not permitted,) and decide from that, whether the genuine disease is developed or not. This most reprehensible custom has been adopted, I presume, without acknowledging its propriety, because it is impossible to induce persons to return, or to convince the class who go there of the importance of observing regularly the different stages of the disease, in order to determine whether true vaccine has been developed. The following admonition of a distinguished authority, Dr. Labatt, is well worthy our consideration:—" Although the cow-pox be a mild disease, and the mode of inoculation apparently simple, yet a previous knowledge of the complaint is not the less necessary; and, indeed, the comparative mildness of it has led many to suppose that it is sufficient to examine the patient once or twice after inoculation. I am, however, convinced, that unless every stage of the complaint be strictly attended to, we cannot give a correct opinion upon the case. It should be recollected that 'there are gradations in the state of the vaccine vesicle, from that slight deviation from the usual course which is of no consequence, up to that which affords no security at all,' and which can only be distinguished by closely watching the arm through the whole progress of the vesicle." (*Vide Address on Vaccination*, p. 15. Dublin, 1840.) The Committee of the Provincial Medical and Surgical Association, in speaking of the tests for determining the true vaccine disease, observe that "the first to which we would advert is the regular progress of the vaccine vesicle, and we would lay it down as an axiom never to be forgotten, that no one is qualified to speak of its effective character who has not, at suitable periods, noticed this progress." (*Transactions of Prov. Med. and Surg. Association*, vol. iii.)

In a majority of instances the vaccine disease undoubtedly pursues its regular course; in others, however, no effect has been produced; and, in a still larger proportion, a spurious disease has been developed, sufficiently analogous to the genuine, to lull the parents of the child into a false state of security, which leaves it in a more perilous situation, from the variolous infection, than it was at first. The security of the public depends so much upon the regular development of the vaccine disease, that the inspection of the vaccinated, at regular periods, should not only be insisted on as a matter of the highest importance, but actually enforced by legal enactment. A slight deviation is at first observed, which gradually becomes greater—therefore, the least deviation from the normal vesicle should at once demand our attention.

(2.) Vaccination may fail in consequence of want of attention to the state of the recipient. The influence of cutaneous diseases, especially on the progress of the vaccine vesicle, is urged by all authorities on the subject of vaccination, and yet how often is the admonition disregarded! At a very early period in the history of vaccination, Dr. Jenner observed the effect of cutaneous eruptions in deranging the character of the vaccine disease, and called the attention of his followers to its importance. In one of his unpublished letters, (quoted by the Committee of the Provincial Med. and Surg. Association,) he observes, that "the greatest of all impediments to correct vaccination is that which arises from an herpertic state of the skin; indeed, compared with this, all the rest are as dust in the balance; and when the rules which I have again and again laid down respecting this point, and for so long a period, are attended to, then, and not till then, will the confidence of the public be fully established as to its preventive power." In another place, the Committee observe, that, "among those of our correspondents who have had most experience, and whose success has been most uniform, we find unequivocal testimony to the accuracy of Jenner's doctrine on this head. Many have made no observation at all respecting it; while some mention dentition, general ill health, scrofula, &c., as impediments to vaccination."

An impression, unfortunate in its effects for the reputation of vaccination, is, that when pure vaccinal lymph is used, genuine cow-pox will be developed, regardless of the state of the recipient. This opinion is a prolific source of evil consequences. Examples are often met with in practice, where the purest cow-pox lymph may, from circumstances connected with the state of the patient at the time, produce an imperfect vesicle. "I have seen infection from the same source," observes Dr. Labatt, "produce in one child a genuine, in another a spurious vesicle, and, in a third, fail altogether."

Not only is a disregard of the state of the recipient, at the time of the operation, a common cause of the failure of vaccination to afford protection, but such patients are also fruitful sources of spurious lymph, which exerts an extensive deleterious influence, by the false security which it affords to others to whom it is applied.

(3.) Another cause which, it is said, may render the anti-variolous power of vaccination imperfect, is the breaking the vesicle in the early stage of its forming. It was a rule established at a very early period, that one or more vesicles should be allowed to run their course without being in any way disturbed, in order to ensure their full protective influence. The weight of evidence is still in favor of the observation of this canon. Dr. Labatt, whose great experience entitles his observations to much respect, says, "when one puncture has been made, and of course there is but one vesicle, I would be disposed to let it run its course uninterrupted, lest, by injuring its structure, we interfere with the regular course of the disease, and prevent the completion of the anti-variolous process." Dr. Baron also insists on leaving one or more vesicles to run their course, without being in any way disturbed, and the late Dr. Chapman inculcated similar views.

On the other hand, M. Bousquet, whose zeal and experience in the practice of vaccination are well known and justly appreciated, argues, that if the full effect of vaccination is obtained on the fifth or sixth day, it can be a matter of very little moment whether the vesicles are left untouched or not. He has also appealed to experiment; having opened the vesicles, he has applied the nitrate of silver to the bottom, so as to put a stop to the local process. He has then re-vaccinated the children, and not in a single instance succeeded. (*Traité de la Vaccine et des Eruptions Varioleuses ou Varioliformes.*) Similar views are, it is presumed, very prevalent here, as it is almost a universal custom among private practitioners, and in some of the public vaccine institutions, to produce but one vesicle, and puncture that at the proper time, for the purpose of obtaining lymph.*

A serious objection to producing but one vesicle, and depriving that of the lymph it contains, independently of the possibility of its impairing the constitutional protection, is, that we cannot afterwards determine so well the true character of the disease; in order to do this, as we have elsewhere said, the progress of the vesicle must be watched through its different stages; if two vesicles are produced, and one should be deranged by accident or puncture, the other enables us to decide its character.

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* Dr. J. Lewis Smith, of the Northwestern Dispensary, has informed me that he does not lacerate the vesicle, because he is inclined to think its protective power would thus be lessened.

(4.) It is alleged that the protective power of the vaccine disease may be imperfect from performing the operation at too early an age, that is, before the system is sufficiently developed to receive the infection perfect; this is considered to take place about the fourth month; and yet, if we are allowed to judge from the susceptibility of the infant to small-pox at an earlier age, this opinion is not based upon correct observation. It appears, from the Registrar-General's second report, that in 1839 the deaths from small-pox in England amounted to 8,714, of which as many as 202 were within the first month, 181 in the second, 162 in the third, and 456 in the fourth month, making 1,001, or 11 per cent. of the whole number under four months. In the official reports made in the country, the ages under one year are not specified, but I have been informed by Dr. Hyatt of the New-York City Inspector's Office, that deaths from small-pox are sometimes reported as early as the second or third week, and it is a well-known fact, that the fœtus in utero is not exempt from variola. These results teach us the importance of not delaying the operation unnecessarily. Indeed, during the epidemic prevalence of small-pox, or when unavoidably exposed, it may be practised within the month, if the infant have sufficient plumpness to allow the insertion of the virus. If however vaccination should be practised so early in life, in order to ensure complete protection, its subsequent repetition, say about the fourth month, as is usually advised, should not be omitted.

(5.) Imperfect vaccination may be the result of the use of virus, which is not in its most perfect form, on account of being taken before it is sufficiently elaborated, or after the areola has formed. It is considered a good general rule not to take lymph before the eighth day, when the vesicle has usually attained nearly, if not quite its full size, and it was a golden rule of Dr. Jenner, never to take virus after the efflorescence appears.

(6.) Dr. Stephen Brown, of New-York, has, in his prize essay on small-pox, called attention especially to the influence of the phlegmatic temperament in preventing the prophylactic powers of the vaccine disease. "It is a fact," remarks the doctor, "well known to every practitioner of much observation, during the epidemics of small-pox, which have recently occurred in this city, that in some families all the children have had the varioloid, and in others one half of the children only have had it, while the other half escaped, although as fully exposed as those who became affected; while, in other families, we see all the children escape entirely, after such exposure to the variolous contagion as to render it certain that they are unsusceptible of its influence. Instead of looking for some external circumstance for accounting for these failures throughout a family, as *bad matter*, *improper mode* of insertion, &c., we would refer the cause to *temperament*, more especially as these children were vaccinated successively in different years, and by different practitioners. It could not be expected, most certainly, that the causes heretofore considered by writers and practitioners as the true ones, and which might be avoided by a little attention, should be permitted to happen so generally in one family, while in other families of many children they do not occur in one instance.

"It is a very common circumstance to witness two distinct temperaments in the same family; this occurs when the father presents one temperament and the mother another; some of the children partake of the father's, others of the mother's." (*Vide Am. Medical Recorder, January*, 1829.)

This view of Dr. Brown, although of no real practical value, is interesting, because it enables us to explain the cause of occasional failures of vaccination, which might have unjustly impaired its reputation.

(7.) It has been asserted that vaccine lymph, in passing indefinitely through a vast number of individuals, with all due care and selection, has suffered an essential diminution in its anti-variolous property; and hence, that this is a frequent cause of small-pox after vaccination.

M. Bousquet, in comparing the vaccine of 1836 with that from which it was derived in 1800, by the aid of a colored engraving, clearly shows a positive diminution of intensity, and explicitly states that the course is changed; from this he infers a failing efficiency in the vaccine. Dr. Gregory, of London, has also observed a "diminished intensity" in the vaccine lymph, and expresses the opinion that, in passing through the bodies of many persons, it loses in process of time some essential portion of its activity. Other high authorities entertain similar opinions, which are contrary to former belief, as well as a most respectable weight of evidence of the present day.

Dr. Jenner declares that there is "every reason to expect that its effects will remain unaltered, and that we shall not be under the necessity of seeking fresh lymph from the cow." The Committee of the Provincial Med. and Surg. Association conclude that vaccine lymph does not necessarily become deteriorated, though it may have passed through a great number of subjects, and have been used for a great number of years. And the National Vaccine Establishment of England also maintains that vaccine lymph retains its protective property throughout, and in their Report for 1839, it is stated that they prefer the vaccine lymph derived from the original virus furnished by Dr. Jenner, and which has been in use forty years, to any which may have been taken recently from the cow.

We may more readily arrive at a conclusion on this subject, by inquiring what is requisite, in order that vaccine lymph should be pure and perfect. It is manifestly of the first importance that it should come from a vesicle which has been regular and complete—that the state of the recipient, with regard to the condition of the skin and other constitutional peculiarities, should have offered no impediment to the regular course of the disease; in a word, that every care should have been taken to preserve its perfect integrity. Now, when we remember the numerous causes detailed above, which it is conceded may impair the protective value of vaccination, and that much of the lymph in use, (as there is great reason to believe,) is derived from such sources, I cannot forbear uttering the conviction, that not only are the individuals who furnish such lymph imperfectly protected, but that the lymph itself is more or less deteriorated.

The virus which I have recently been using is the 180th remove from the cow, and was furnished me by my friend, Dr. C. L. Mitchell, of this city, who obtained it of Dr. J. Otis Pond, of New-York. Dr. P. has informed me that it is the portion of a stock obtained through a friend, from a physician of Bristol, England, who had been employed to procure fresh virus for the London Vaccine Institution, which he did by variolating the 'sturk. Dr. Pond was supplied from the 18th remove, and from the care which he has exercised in keeping a registry of all vaccinations, rejecting virus from any except perfect pustules in healthy infants, we may infer that it is now uncontaminated.

In order to determine more accurately the difference in the effects of this virus, and that which has long been current in man, I have used both, simultaneously applied at different points in the same subject, and have invariably found the vesicle produced by that recently from the cow developed with more certainty, and its local action more analogous to that described by Jenner. This also coincides with the experience of Dr. Mitchell, and is further corroborated by the observations of Dr. Marvin, another distinguished physician of this city, both of whom have used virus from the same source for five or six years. If the test I have just mentioned could be more generally applied, I cannot doubt but that much of the prejudice recently excited against vaccination, in consequence of its failures, would be ascribed to the proper cause, viz., deteriorated lymph.

A third cause of the recent prevalence of small-pox is *epidemic influence.* The origin of variola is universally admitted to be a specific contagion. But that some other influence occasionally co-operates with contagion in producing this, as well as other diseases of analogous origin, is evinced by the fact that, although scarcely a week passes without some deaths occurring from small-pox, it only occasionally occurs as an epidemic, and then attacks many who have been frequently exposed to the contagion on former occasions without effect. What the origin or essential nature of this unknown influence is, cannot be determined in the present state of our knowledge; its effects, however, we are sufficiently familiar with. In the earlier ages of the world it was attributed to the anger of the gods. In later times its origin has been ascribed, with scarcely more reason, to some mysterious astral or meteoric agency; whilst others maintain that it is produced by lethiferous agents which are extricated from the earth by the convulsions of nature. It is scarcely necessary to say that these explanations are purely hypothetical. We might indulge in much curious and interesting, but unprofitable speculation upon this subject, but we can only say with certainty that there must be some distempered condition of the physical agents around us, which occasionally generates a stronger predisposition to the disease than exists under other circumstances; and this, which we call epidemic influence, added to contagion, causes many individuals to be attacked with small-pox, to whom in ordinary seasons the vaccine disease would afford a sufficient security.

Although we know absolutely nothing of the origin or real nature of epidemic influence, we can observe its effects, and to some extent understand the laws which control its mysterious operations. And it behooves us to prepare for future aggressions of this epidemic influence by the exercise of proper care and vigilance in vaccination, thus depriving it of the pabulum with which it has so recently, and is now satiating its gluttonous appetite.

A fourth cause of the recent epidemic is the neglect of re-vaccination. It is impossible to say with accuracy how far this may have contributed to the late prevalence of small-pox, because we cannot determine to what extent it has been neglected, nor can we say positively in any given case of small-pox that re-vaccination would have averted it. We may, however, by examining the question of its necessity, be able to conjecture with some probability how much it might have contributed to the prevention of the disease.

The distinguished Dr. Gregory has promulged opinions on the subject of re-vaccination, which, as I think, are not only at variance with well-established facts, but, from the high position he occupies, are calculated to effect serious harm; it becomes, therefore, a matter of grave importance to bring in review briefly some of the facts bearing on this subject.

In a discussion which took place before the Royal Med. and Chirurg. Society (vide *London Lancet*, March 8th, 1851), Dr. Gregory stated that, up to fifteen, the protection afforded by re-vaccination was as great as that afforded by inoculation all through life. After fifteen the system was subject to another law. "With respect to the question," he goes on to say, "as to whether re-vaccination after fifteen renewed the protection, he might answer, that in his opinion re-vaccination was a proceeding of very little moment. It satisfied the mind of the public rather than effected any real good. If it satisfied the mind, why should it not be performed? Let it be so by all manner of means, but not under the impression that it afforded any protection." Had we no other evidence of the importance of re-vaccination, that derived from the results of the operations in the Prussian army would be sufficient. Before re-vaccination was enforced, the different military stations were a prey to variolous disease, which has now almost entirely disappeared. From the Report of 1849, we find that 51,637 individuals were re-vaccinated, and only 62 cases of variolous disease occurred throughout that year, of which 9 were genuine variola, 24 varioloid or modified small-pox, and 13 varicella. One case only was fatal. A recruit, vaccinated when a child, had not yet been re-vaccinated, and died on the 10th day. (*Am. J. of Med. Sci.*, vol. xxi., p. 479.) But we need not traverse the ocean to find evidence of the importance of re-vaccination. Our own country furnishes no statistical data on this subject, but occasional cases must have been witnessed, by almost every practitioner who has seen much of small-pox, illustrating the value of this precaution.

In advocating re-vaccination, it must not be implied that it is the writer's opinion that the protective power of vaccination extends to a limited number of years, and that afterwards the individual is again susceptible to variola. This question may still be considered as *sub judice.* Nor do we believe that a successful re-vaccination proves that the individual who has been subject to it is thus shown to have lost his vaccine protection, and consequently to have been liable to small-pox infection. Its importance is urged from other considerations, some of which will now be mentioned. (1.) We have no means of determining whether the vaccination was correctly performed; whether the development of the disease was regular and complete, and whether the condition of the patient was such as that no impediment was presented to the regular course of the affection. These it is impossible to know unless you have regularly and carefully watched the course of the disease, or have repeated the operation with genuine virus until there remains no longer a susceptibility to the vaccine impression, as was long since suggested, or applied to the well-known beautiful and ingenious test of Mr. Bryce. Even exposure to the contagion of variola with impunity, although it affords strong presumptive evidence, is not a positive assurance that the individual is protected by vaccination, because we occasionally meet with persons who have from time to time resisted the usual influence of contagious diseases, but finally have succumbed. A still less reliable evidence of perfect vaccination is the appearance of the scar, which, according to some of the most experienced observers, offers nothing characteristic. (2.) As the permanent influence, even of duly conducted vaccination, is by no means a settled point, and as re-vaccination can do no harm, and may afford security from a most loathsome if not dangerous disease, we can see no possible reason why it should not be practised universally. If the following rule, laid down by the Committee of the Prov. Med. and Surg. Association, were generally acted on, I imagine we should hear much less of variola after vaccination:

"*All cases of reputed vaccination, unless they have passed under the review of a competent judge, who has witnessed the different stages of the affection, should be considered as no vaccination.*"

"Until this canon be universally admitted and acted upon," the Committee go on to say, "we shall never have attained the complete security that vaccination is capable of affording. Failures may still occur, but they will neither be so numerous nor so fatal as they have been reported." It has been urged that if re-vaccination be looked upon as essential, less attention will be paid by practitioners and parents to the first vaccination than its importance demands, under the impression that any imperfection would be rectified by the subsequent operation. It seems to me extremely improbable that physicians, or parents especially, would incur the risk of having their patients or children contract variola from a want of proper attention to vaccination, especially when its protective power, for a certain period at least, is so universally conceded."

From the materials presented in the preceding pages, and from other sources, the following conclusions may be legitimately deduced:

1st. That the recent extensive prevalence of small-pox in New-York may be, to a great extent, attributed to the *neglect of vaccination*.

2d. *To imperfect vaccination*, which may occur: (1.) From not observing the regular progress of the vaccine disease. (2.) From a want of proper regard to the state of the recipient. (3.) From injuring the vesicle. (4.) Performing the operation at too early an age. (5.) Using lymph taken at an improper stage of the disease. (6.) Peculiarity of the temperament of the recipient. (7.) Vaccinating with lymph deteriorated by age, or any of the above causes.

3d. To epidemic influence.

4th. To a neglect of re-vaccination.

From the investigation we have made of the subject, our estimate of the immense value of vaccination is not only undiminished, but is positively increased, and we now feel more inclined to rally around the standard erected by the immortal Jenner, and vigorously to defend from the assaults of ignorance and prejudice the most brilliant triumph of modern medicine.

I cannot close this inquiry without urging in conclusion the importance of the establishment of a "National Vaccine Institution," on a broad and liberal plan, which should be so conducted as constantly to keep ample supplies of *pure* vaccine virus, (which can be easily obtained by variolating the cow,) with which, from the great facilities of communication that now exist, the most remote section of our widely extended country could be promptly supplied. It is a well-established fact that cow-pox can readily be produced by inoculating the cow with human small-pox matter, and that lymph from this source develops in man a disease identical with that produced by casual small-pox. This experiment is said to have been successfully made so early as 1801, at the Veterinary College in Berlin. It was repeated in this country by Dr. Carpenter, of Philadelphia;* Dr. McPhail, of Baltimore, now of this city, (*Balt. Med. and Surg. Journal*, vol. ii., p. 301,) and also by Dr. Martin, of Massachusetts, *Med. Examiner*, v. iv., p. 782. Dr. Basil Theile, of Kassan in Russia, (*Am. J. Med. Sci.*, N. S., v. ii., p. 467,) and Mr. Seely, of Aylesbury, in England, (*Trans. of Prov. Med. and Surg. Association*,) have also performed similar experiments. To the latter gentleman especially are we indebted for much valuable information on the whole subject of *Variolæ Vaccinæ.* With the lymph obtained from the variolated cows, each of the experimenters succeeded in developing in the human subject vaccine vesicles in the most complete and reliable manner.

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* Noticed in *Med. Recorder*, No. xxviii., p. 210.

Such an establishment as we have mentioned, together with legal enactments enforcing vaccination under severe penalties, would be of incalculable aid in the suppression, if not the extinction, of the most loathsome and hideous disease that ever afflicted mankind. In New-York, vaccination is freely offered, "without money and without price," and its importance has been recently urged in hand-bills by the mayor, and yet how many reject the gratuity, except when alarmed by epidemic small-pox! and nothing less than legal compulsion will obviate the evil.

It is a matter of surprise that we are so far behind many of the less enlightened and more despotic countries of Europe on this subject, and that now, fifty-eight years after the discovery of vaccination, its importance remains to be urged. We might enter at large into the discussion of the propriety of compulsory vaccination, but we have already exceeded the limits at first contemplated. This question may, however, be examined at a future time.

GREENWICH AVENUE, BROOKLYN, *April* 1854.

ART. III.—*On a Peculiar Form of Malignant Inflammation of the Lips and Face, resembling Malignant Pustule.* By W. PARKER, M. D., Professor of Surgery in the College of Physicians and Surgeons, New-York.

THERE have come under my observation, within a recent period, several cases of a peculiar form of inflammation of the lips and face, which resembles somewhat phlegmonous erysipelas, but more strikingly, especially in its commencement, malignant pustule, and, in its subsequent progress, carbuncle. It, however, differs from these affections in some essential particulars, which will be noticed after giving the details of the following cases, which illustrate the peculiarity of this form of disease.

CASE 1.—I first saw this patient on the 18th of last December. He was a young man, aged 23, merchant, of good character, temperate habits, and in the previous enjoyment of good health. About a week before I visited him, a small pustule made its appearance upon the central portion of the lower lip, just below the edge of the vermilion border. It became painful, had a livid areola, gradually but slowly enlarged, and finally broke and began to discharge. The pain increased, and the swelling extended downwards upon the chin. At my first visit, about this period, the tumefaction had reached as low as the os hyoides, and had extended over the right side of the face to the head; it was hard to the feel, of a livid color, insensible, and had now much the appearance of a carbuncle. The lips were greatly tumefied, everted; gums swollen, and of the same livid color; tongue moist; inside of mouth unaffected; ptyalism considerable. The lower lip, about the seat of the original pustule, appeared gangrenous. The pulse was 120, rapid and feeble, respiration unaffected. He was able to get up and sit in the chair, but was suffering from great depression of the vital powers. The course pursued consisted of deep scarifications of the lips and yeast poultices to the swelling, and stimulants to sustain the general system. The swelling continued to extend, involving successively the neck, face, and finally the head. He died on the following day, the 19th, late in the evening.

Case 2.—I visited on the 15th of January, a patient, aged 45, merchant, suffering from what appeared to be a carbuncle of the under lip. He was of a good constitution, temperate habits, and in the enjoyment of good health, previously to the present attack. Four days before I saw him, he was supposed to have cut the lower lip slightly, and applied to it arnica. The inflammation commenced at this point, the lip swelled largely, became everted, had a livid color, was tender, hard, and the seat of a burning pain. At several points there were small sloughy apertures, discharging thin pus. The constitutional symptoms were considerable, but not sufficient to confine him to his room. The treatment consisted of free incision and yeast poultices to the lip, and sustaining remedies for the general system. Portions of the lip sloughed, but he recovered.

CASE 3.—Mr. W., aged 26, married, furniture dealer, of good habits, and hitherto perfect health, discovered a small pustule on the under lip near the right angle of the mouth, on the 2d of April. It was tender on pressure and had a hard base, but attracted no other attention. During the night the disease extended considerably, involving the whole lip and the right side of the face in a hard, livid, and painful swelling. On the evening of the second day his physician first saw him, and found the lip greatly swollen, of a livid color, and the seat of a burning pain. He scarified the parts for the purpose of local depletion, and also applied leeches. The swelling continued to extend, involving the right side of the neck and face to a great extent. I saw him on the 7th, at 11 A.M. His symptoms were then most unfavorable, pulse 130 per minute, intermittent every seventh or eighth beat, weak and small; respiration rapid, moaning; skin warm and moist; urine free; pupils much dilated; mind clear. He complained of oppression about the chest, and had not been able to obtain sleep. Both lips were involved in the swelling; were hard, livid, and insensible; the whole side of the neck and face was similarly affected, the eye being nearly closed. The frontal vein was livid, red, and prominent, and the veins of the cheek were also visible, as if distended. The treatment consisted of deep scarifications of the lips, and yeast poultices to the part, with anodynes and stimulants. I visited him again at six o'clock, P.M., and found him rapidly failing; treatment of no service. He died the same evening.

CASE 4.—I was called, April 10th, to see Miss S., aged 30, occupied as a governess, of good constitution, whom I found laboring under the same difficulty as in the preceding cases. Her history was almost precisely similar. Five days before, while in the possession of apparently perfect health, she first observed a small pustule on the lower lip, just below the red line of mucous membrane; it was regarded as a small boil, and no attention given to it. On the following day the pustule had enlarged somewhat, was hard, and had a livid areola, but she continued about her employment; she spent a feverish, restless night, and on the next day called her physician. The disease gradually extended, assuming the appearances already noticed, and for two days no danger was apprehended. Her symptoms now became much more unfavorable, and at this period I first saw her. She was lying in bed quite insensible; deglutition difficult; respiration laborious; right side of body paralyzed; lips large, everted, and cold; right side of face, neck, and forehead swollen like the lip, hard and purple; right eye protruded; pupils dilated and insensible. On making an incision into the lip, the cellular substance was found filled with small deposits of pus, which were forced out on slight pressure. As she was moribund, treatment was of no avail.

From the history of the foregoing cases it is evident that this disease differs from erysipelas, for which it has in several instances been mistaken, in its origin in a pustule, without a chill or other constitutional disturbance, the hardness of the swelling, its purple or livid color, insensibility, and absence of much pain. It differs from carbuncle, which in some features it resembles in the class of individuals which it attacks—they being young, temperate, of sound constitution, and in the previous enjoyment of good health—and in its rapidly fatal course. Carbuncle, on the contrary, occurs by preference in persons enfeebled by age or vicious habits. It differs again from true malignant pustule, to which in its origin it seems allied, by attacking persons who have nct been affected by poisonous wounds, or who have been liable to the introduction of animal poisons into the system.

This disease would therefore seem to be peculiar, having many points of resemblance to other similar affections, but still not so closely allied to any one as to warrant its classification under the same head. In every instance which has come under my own observation, the pustule has been seated upon the lower lip, and from this point the inflammation has spread. In a fatal case related to me by a physician, in whose practice it recently occurred, the pustule was seated upon the side of the nose.

Although the nature and progress of the disease show a vitiated state of the system, in no instance have I been able to trace the attack to the contact of poisonous matter, or its reception into the system in the food or drink. In every instance the patient has been in the enjoyment of good health, and the progress of the disease, though rapid, has excited so little local and general disturbance as not to excite alarm until a short time before its fatal termination. The general symptoms are of a typhoid character, the vital powers being evidently depressed either by the influence of the disease itself, or, which is more probable, the cause upon which the development of the disease depends.

The late Dr. Peirson, of Salem, Mass., reported (*Bost. Med. and Surg. Jour.*, 1852,) several cases very similar to the above, and considers the disease malignant pustule. Among them is the case of Hon. Robert Rantoul, whose disease was thought to be erysipelas, but which Dr. Peirson describes as malignant pustule. The pustule in this instance was situated upon the forehead, and depended upon no known local cause. With but one or two exceptions, the remaining cases in this paper occurred in curriers, and hence Dr. Peirson attributes the disease to inoculation with dead animal matter. Some of them bear a strong resemblance to the cases above related, the disease attacking the lips of healthy young persons, entirely unexposed, and spreading thence upon the face. These can scarcely be classified under the head of malignant pustule as described by authors. Bayle speaks of a form not depending upon an external cause, but this distinction is not generally received.

The success of the treatment depends upon the *early* recognition of the true nature of the disease. It is very liable to be mistaken for erysipelas, and a course of treatment adopted accordingly, which avails little in staying its progress. Attention to the points of a differential diagnosis already given, will prevent the practitioner from falling into this error. The treatment best adapted to meet the indications of the case are deep and free scarifications, followed by yeast poultices, or turpentine, the object being to prevent sloughing and to promote healthy suppuration. The general system requires soothing and sustaining remedies, such as are suited to an ataxic condition. The early and prompt employment of these means will afford a fair, and probably the only, hope of success in the treatment of this disease.

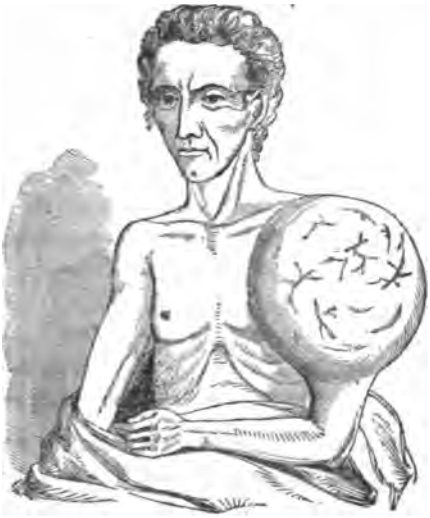
My object in this communication is to call special attention to this disease, which, from the frequency of its occurrence in my own practice, and other cases which have been related to me, seems to be very prevalent. The points of particular interest are in regard to its causes and pathology. Does it depend upon an endemic or epidemic cause, or upon the introduction of animal poison into the system? Is there phlebitis as a cause or consequence? These questions are important and can only be settled by careful observation made upon the living and dead subject.

ART. IV.—*Case of Amputation of the left Arm and Shoulder, including Portions of the Scapula and Clavicle, for the Removal of a large malignant Tumor.* By MOSES SWEAT, M. D., of N. Parsonsfield, Maine.—[With Illustrations.]

ON the 3rd of October, 1847, I was called to examine Ira Hobbs, in S. Bridgeton, aged 27, in regard to the expediency and practicability of amputating his left shoulder, for the removal of a very large tumor, of a carcinomatous character, involving all the bones and soft parts forming the shoulder-joint and the upper half of the arm. He had suffered much from this affection for a long time, and he had as long hoped in vain that some change in the tumor might take place for the better.

I found him feeble, much emaciated, and suffering severe pain continually, from compression and irritation of the brachial plexus of nerves, excepting when he was under the stupefying effect of opium or morphine. And he was attended with distressing gastric irritation, produced, as I supposed, by the use of narcotics.

On exploring the chest, I found evident signs of organic lesion of the left lung, to some extent. The tumor was spheroidal, eight inches in diameter, hard, smooth, and uniform in its appearance. The skin was thin, from over-extension, but not discolored, except that the cutaneous veins were enlarged and blue. And, though there was no ulcerated surface, the odor arising from the tumor was very offensive. The shoulder joint was immovable, and, from the firm adhesion of the tumor to the upper part of the chest, it seemed probable that not only the muscles about the shoulder, and the scapular and pectoral muscles, but the intercostal muscles also were involved in the disease, and that it might be extending into the thorax. No particular cause could be assigned, by the patient or his friends, for the formation of tumor, excepting that, six years before, he fell from a low building, and struck on his back and shoulder; but there was no perceptible injury at the time, no fracture, dislocation or contusion. He was, however, after this, occasionally troubled with "rheumatic

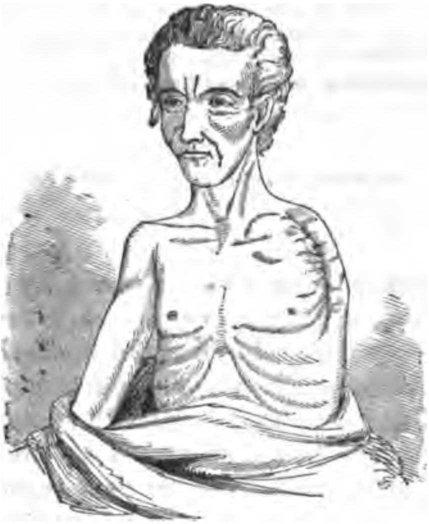


pains" about his back, neck and shoulder. No enlargement of the parts was noticed for two or three years, and, for some time after the tumor was first discovered, it grew very slowly; but, for about a year before I saw him, it had grown rapidly, and his sufferings had increased in proportion to the increasing size of the tumor. Taking the case into consideration, in all its bearings, I was decidedly of opinion, that amputation, at this late stage of the disease, could not effect a cure; and although it might mitigate his sufferings in some measure, yet it seemed to be too formidable an operation for so feeble a man to bear, with no better prospect before him. I therefore advised him to continue in the use of such remedies as might best relieve his sufferings, and make him as comfortable as the nature of the case would permit, and to submit with as much patience and fortitude as possible to what awaited him; gave him such directions and prescribed such palliatives as seemed to be necessary at the time, and left him, never expecting to see him again.

About the 20th of the same month, I was called to visit him again, with an urgent request, by the messenger, to operate, if, on another examination, I should think "he would live through the operation." He said that Dr. Dunnells had rather advised to the operation since I was there. I accordingly went, and took with me my son, Dr. Wm. W. Sweat, to assist me, in case we should operate. On our arrival, we found the patient extremely anxious to have the limb removed, with the hope only of its mitigating his sufferings, during the short time he might live. Though he was at this time exceedingly feeble, and could not be raised in bed, nor elevated even at a moderate angle from a recumbent posture, without being faint, yet on the whole we were of opinion that, with due precaution in regard to securing the arteries, he would survive the operation. We accordingly made the necessary preparation; placed him on a table on his right side, with his head low, to guard against faintness. Ether was administered by a young surgeon dentist, by the name of Heald, and Dr. Jefferson Carter assisted us in the operation, which was performed as follows, viz.:—Commenced at a point two and a half inches below the ear, and, by two curvilinear incisions, divided the integuments anteriorly and posteriorly towards the axilla, the centre of which could not be reached by about two inches each way, on account of the fixed position of the limb and the size and pressure of the tumor against the side. On slipping back the integuments, or rather the skin (for there was no cellular nor adipose tissue), the tumor presented a disorganized, though smooth surface, of a dark livid color, emitting the same odor as when covered by the skin. With our fingers and the scalpel, we soon brought down that part of the tumor which laid over and under the clavicle, and in the fossæ supra and infra spinata of the scapula, and with the saw removed such portions of these bones as were implicated in the disease, about two inches in length of each bone. Here we secured two small arteries, the posterior and superior scapular, which, coming from the subclavian, would continue to bleed after securing the axillary, which we had not yet come to. Proceeding to remove the diseased mass, we found that it had pushed itself deep under the scapula and clavicle, destroying the subscapulan, subclavian, and pectoral muscles, and that it had insinuated itself between the three upper ribs, among the intercostal muscles, and, in all probability, its work of destruction was going on within the ribs. We now came down to the axillary artery, and secured it by ligature before dividing it, at the point where it assumes its name, within an inch from its exit from between the scaleni muscles. Here, too, we secured, in like manner, the axillary vein; it being large, and, fearing that it was distended beyond the capacity of the valves, we thought it safer to secure it before dividing, and thereby avoid the danger of retrograde hemorrhage, and the disastrous consequences of the rushing of air into this peculiar and important vein. These vessels and the brachial plexus of nerves seemed to be sound, with the exception of the enlargement of the vein, and a slight discoloration of the neurilemma of the nerves. These vessels and nerves were then divided, and the limb removed by forming, with one stroke of the knife, the lower angle of the wound.

The flaps, which came together well, were secured by sutures and straps in the usual manner, and the patient replaced on his bed, apparently as comfortable as when taken from it. Not having lost a drop of blood from the principal artery, and but a very few jets from the smaller ones, he was not exhausted by hemorrhage.

He was subsequently under the care of Dr. Dunnells, of Harrison, by whose judicious treatment he was made comparatively comfortable till his death, which occurred on the 27th January, 1848.



I saw him but once after the operation, and this was on the 24th Nov. Up to this time he had been quite comfortable. The wound had united by the first intention the whole extent, excepting at the lower angle, where the ligatures had passed out. There was, at this time, a small tumor forming under the skin, near where the clavicle was removed; but, as it gave him no pain, and there were now unequivocal signs of permanent disease of the lungs, which was rapidly progressing, I thought it not expedient to remove it. This secondary tumor grew considerably, and remained hard till a short time before he died, when it became softer; but some time before this softened the purulent discharge from, the lungs commenced, and he soon ran down.

Note.—In a letter from Dr. Dunnells, in answer to one I sent to him, he writes as follows:

"I first saw him (Mr. Hobbs) Oct. 14th, 1847. My impression of his case was, that if he could lose the entire disease about the shoulder, it was all the chance there was of his living long, and that was uncertain. With the hope of palliation and protraction of life alone, I advised the operation.

"I think the operation did all that we expected from it. It relieved him very much. The wound closed over, with the exception of a small opening at the lower angle.

"The probability in my mind was, that if the operation had been earlier performed, before the lungs became diseased, while all the diseased parts could have been taken away with safety, we might have saved him.

"The purulent discharge from the lungs commenced some time before the softening of the external tumor, and he sank from exhaustion."

Art. V.—*On Trephining in Infancy, with the Report of an Operation performed at a very early Age.* By Jas. L. Van Ingen, A. M., M. D., Schenectady, N. Y.

Alfred, a child of Garret Van Vranken, of Schenectady, aged twelve months, while playing at a back door which was guarded by a board placed against the casing, was precipitated, head foremost, down two steps to the ground, the board being first displaced, and the child impaling itself on a "tenpenny" nail which was sticking in it. The nail entered the right side of the head, near the right parietal protuberance, and considerable force was required to remove the child from the board. The accident occurred at 6 P. M., Sept. 20, 1847. Professional assistance was sought in consequence of *apprehension* of danger, the child being apparently well.

At 7 o'clock, P.M., I first saw the case. The pulse was frequent, but there was a total absence of any other extraordinary symptoms.

Upon an examination of the wound with a probe, I found the nail had pierced the skull and membranes, and entered the brain to the depth of two and one-quarter inches, measuring from and including the scalp, which was normal as to thickness.

I left directions to have the child closely watched, and to be informed immediately, should any alarming symptoms show themselves.

At midnight the child vomited, and had slight general convulsions, which lasted about half an hour, and then ceased entirely, their lack of severity not alarming the parents sufficiently to induce them to apprise me of the fact. The remainder of the night the child slept naturally, having neither stertor nor convulsions.

Sept. 21.—At nine o'clock, A. M., was called in consequence of the return of unfavorable symptoms. About this time the child commenced vomiting, and had convulsions of the left side of the body until about ten o'clock. At ten o'clock, there was paralysis of the muscles of the left side, except those of the face, which continued their convulsive action until half-past ten o'clock, when the child became insensible, and commenced sinking.

I then advised trephining to remove the small portion of bone displaced by the nail, which I regarded as the immediate and sole cause of all the unfavorable symptoms, acting simply as an irritant; but a consultation, which was called by the parents, decided that the operation was unwarrantable, and held out no reasonable hope of benefit:

1st. Because so small a portion of the bone as the end of the nail displaced could not produce such grave symptoms.

2d. That a child's brain could accommodate itself to infinitely more pressure.

And 3d. The probable cause of the convulsions, depression and sinking, was not the simple irritation of so minute a portion of the skull as had been displaced. Indeed, it was regarded as improbable that any displacement existed, for even if the inner table had yielded in the first place to the pressure of the nail, it was supposed that, from its great elasticity at so young an age, it had resumed its natural position. The symptoms were, therefore, attributed to the penetration of the nail to so great a depth into the substance of the brain.

Dr. Chas. Martin, at present attached to our naval medical service, differed from the opinion of the other physicians in consultation, and insisted that the operation held out not only the sole hope of recovery, but a rational certainty of such an event. These were my own views, but the other physicians persisting in their opinion, and the parents refusing to consent to an operation, Dr. Martin and myself were left in a minority, and we simply watched the progress of the case.

At 12 o'clock, M., the skin was cold; there was no pulsation perceptible at the wrist, and but feebly at the corotids. I again urged the operation, and those who had opposed it now consented, because the child would CERTAINLY DIE, and *the operation would only shorten its life an hour or two.*

Operation.—The child was perfectly insensible, the breathing scarcely perceptible, and apparently it did not feel the incision in the scalp to expose the bone. When the bone was fully exposed, a small irregular opening was discovered, sufficient to admit the passage of the nail, the sides of which gradually approximated each other at the bottom, the nail having entered obliquely. Upon removing, with the trephine, the portion of bone represented in the cut (*c*), the depressed portion of both tables represented in the cut (*b*), was discovered, the degree of depression being irregular, from the oblique entrance of the nail. The appearance of the parts is very accurately and elegantly represented by the artist (Mr. Holton) in the cut (*a*).

Immediately upon the elevation of the portion of bone the child became sensible, the muscles of the left side of the face commenced twitching, then those of the whole left side of the body, and, immediately after, those of the whole body were affected with a slight convulsive movement; the pulse returned at the wrist, the heat to the surface, and the child had free use of its limbs, with the exception of the arm of the left side, which was partially paralyzed.

(*a*) A lateral view of the portion removed, showing the actual amount of depression.

(*a*)

(*b*) An internal view of the portion removed, showing the two small portions of both tables of the skull depressed.

(*b*)

(*c*) An external view of the portion removed, being a portion of the right parietal bone near the parietal protuberance, showing the opening in the bone, caused by the entrance of the nail.

(*c*)

The wound was then brought together and dressed, the child removed to a dark and quiet room, to secure the brain from all disturbance, from light or noise, and then left with but one attendant. At 12 o'clock, M., the child had a slight convulsion—(℞. Sulph. Morph. gr. 1-16) and the remainder of the night it slept quietly.

Sept. 22.—The day after the operation, the use of the left arm was perfect.

Sept. 28.—The child was removed to the family room, and the wound healed entirely in about three weeks. No further medication was used after the morphine of the first night, subsequent to the operation, with the exception of one drachm of castor oil, and the application of rum and water to the head.

April, 1854.—The child is healthy, has never had fits, spasms or spasmodic action of muscles since his recovery from the operation in Sept., 1847.

Remarks.—There are some points connected with this case worthy of a passing comment. In the first place, it seems surprising that so slight a depression should be productive of such serious symptoms. So numerous are the instances on record in which the most extensive mutilations of the brain have caused but trifling inconvenience, and have been followed by a speedy recovery, that it could hardly have been expected, especially in so young a patient, that the case would have assumed so grave an aspect.

We are inclined to believe, after a considerable examination of the subject, that our patient was the youngest in which the trephine has been applied. Many of our leading authorities inculcate the doctrine, that in consequence of the peculiar condition of the bones in children, particularly very young children, the operation of trephining can seldom be indicated. For example, Mr. Guthrie thus expresses himself on this point.

"There is an essential difference between a depression of the skull in a *child* and in an *adult*. In the child the inner table is not brittle—it bends equally and does not break; it very often does little mischief when depressed, and gradually recovers its level. The brain in young persons is softer, less consistent, and can accommodate itself more readily to pressure for a limited time, without ultimate mischief, than the brain of an adult; so that the most urgent symptoms can alone authorize the application of the trephine in children, and in young persons under fifteen or sixteen years of age. The same bending of the long bones in young children is often observed at the same period of life." (*Commentaries in Surgery*, p. 337.)

Our patient forms an exception to another rule laid down by Mr. Guthrie (*op. cit.*, p. 345) and other writers, that young persons bear with impunity a greater degree of pressure and irritation than those of mature age, and we are strongly disposed to question his assertion that by far the greater number of cases in which recovery has taken place after fracture and depression of the skull, with injury of the brain, and loss of its substance, have occurred in children or in persons under the adult age. No one will dispute the fact, however, that in young children indentations of a large surface of the skull may occur to an astonishing extent, and yet no symptoms of pressure shall be manifested. Mr. South, in his edition of *Chelius*, vol. i., Am. Ed., p. 431, relates a remarkable case of this kind, the upper part of the lambdoidal suture having been so deeply indented "that the bowl of a dessert spoon would easiliy lie in it," and yet this child never had a bad symptom, but left St. Thomas's Hospital perfectly well, although the skull remained indented as at first. Between these cases, however, and punctured or penetrating wounds of the skull, there is a vast difference. Proof of this is furnished by Mr. Guthrie himself. We refer to the case reported by him in which a boy was struck by his playfellow with the end of a thick iron wire, which passed under the upper eyelid, between it and the eye, penetrating the brain. This child died on the sixth night after the accident, no operation having been performed. He remarks, in addition, that he has seen two other cases in children of a similar character, and terminating in the same manner. (*On Injuries of the Head*, pp. 137, 138).

Again, Sir Astley Cooper teaches, that when pieces of bone penetrate the brain, if symptoms of pressure do not exist, they should not be removed, as an operation for this purpose would be likely to give rise to extravasation of blood. —(*Lectures on Surgery*, by Tyrrell, vol. i., p. 315, Lond. Ed.) Now, suppose that the wound in the case of our patient had produced no immediate unpleasant effects, is it not almost certain, that, in after years, if the depressed fragments had been permitted to remain, severe cerebral irritation would have been the result? Had we trusted to depletion, and other antiphlogistic measures, we are satisfied that the result in our case would have been similar to that in the instances referred to by Mr. Guthrie.

This course was likewise unsuccessfully pursued in the case detailed by Mr. Liston in his *Lectures on the Operations of Surgery, &c.* Edited by Dr. Mutter, 1846, p. 87. In this instance, a boy, twelve years of age, fell upon a nail in the door, which penetrated his skull near the right parietal eminence. He felt giddy at the time, but was not completely stunned. Swelling of the scalp followed, with some pain and tenderness, for which leeches were applied, and purgatives administered. On the sixteenth day he became delirious; and, for some days afterwards, he appeared drowsy, had frequent vomiting, dilated pupils, &c., for which symptoms Mr. Cooper applied the trephine, and the operation was followed by complete success. The dura mater beneath the puncture was found thickened and inflamed, and presented a small aperture through which fetid pus flowed freely.

In conclusion, we would remark, that our patient, now nearly seven years after the operation, most beautifully exemplifies the possibility of a closure of the orifice made with the trephine, by ossific deposit, as scarce a vestige of it remains uncovered by bone, and we have every reason to hope that, in a few years more, the opening will thus be completely effaced.

ART. VI.—*A Case of Congenital Absence of the Parieties of the Bladder and Abdomen.* By DR. WALSH, East Brooklyn, N. Y.

ON the 7th of March, 1854, a strong, healthy woman, the wife of a laborer residing in Walworth-street, East Brooklyn, gave birth to a male child, in which the abdominal wall and the front portion of the bladder are totally absent in the mesial line, the rectus abdominis being covered over, for about two inches square of the lina alba, with a red, spongy or fungoid-looking mass, covered with mucous membrane, and bleeding very readily on being touched roughly or rubbed. On the surface of this mass, which presents in reality the mucous membrane of the bladder, are two small openings for the mouths of the ureters, which keep up a continual moisture and irritation on the exposed membrane. The contraction of the surrounding parts acting also on the urachus, probably has drawn down the umbilicus much nearer than usual to the pubes.

Separate from this malformed bladder, towards the pubes, is another ill-looking, red mass, which, after close examination, you trace out to be an effort at the formation of a penis. It is oblong, deeply grooved, or rather cleft, in the centre, and on each extremity is fixed a very small portion of the glans penis, and a trace of the frænum also remains; but no prepuce. The urethra is totally absent; there is no appearance of a prostate; the scrotum is very perfect and thoroughly corrugated by the dartos, and the testes are also present. The child enjoys excellent health, and bids fair to maintain his existence. The parents are healthy, and by their account the child inherits no taint, syphilitic, scrofulous, or otherwise, from either themselves or their families.

A case somewhat like the foregoing, in a young man of rather delicate appearance, was displayed at the Cliniques in New-York in 1846, and attracted much attention at that time. In him the ureters opened on the surface of the skin, on either side of the penis, which was formed of the glands only; there was no urethra, the raphe passed deeply through the scrotum, and the tissues, being puffy, gave a pretty good imitation of the labia and clitoris of the female. The testes were present and settled the question of sex.

In the *Southern Journal of Medicine* for Jan., 1847, Dr. Hardy, of Nashville, N. C., has given an interesting case similar to both recited above, illustrated by a splendid lithograph. His case was fourteen years of age before he could determine the sex, and then, he says, "the testes first began to be developed." The red, fungus-like mass, was in this instance on the site of the mons veneris, and presented on its upper part the fissure for the urethra, as in the first case above described; the surface of it bled on the slightest irritation. There was no portion of the red mass that could be pointed out as a malformed penis. The person was delicate in form and manners, bashful, and displayed no sexual desire.

In the *American Medical Intelligencer* for July, 1840, Dr. Curtis gives a case of the same kind. Dr. Dunglison, the editor, in introducing the case, mentions two others like it, then living in Philadelphia.

Dr. Baillie in his *Morbid Anatomy* mentions a like case, which he saw, and refers for the details to the *Medical and Chirurgical Transactions*, where he had reported it. In Dr. Gross's *Pathological Anatomy* there is nothing on the subject; congenital absence of the urethra, and its opening in various unusual positions, is noticed, but no nearer approach is made to a description of the foregoing malformations. Baillie takes no notice of congenital deficiencies or malformations of the penis, which is a constant occurrence in cases like the foregoing.

Meckel, in his *Anatomy*, gives a full and satisfactory account of all such cases. No notice is taken of these cases in any of our systems of midwifery, anatomy, &c., except in the above-mentioned instances.

Franklin Avenue, *East Brooklyn*, March 23, 1854.

Art. VII.—*A Critical Examination of a Pathological Specimen of Softening of the Intervertebral Cartilages.* By Louis Bauer, M. D., Member of the Royal College of Surgeons, England, late Surgeon to the Royal Orthopœdic Institution at Manchester, &c., &c.

Dr. Lewis A. Sayre, Surgeon to Bellevue Hospital, exhibited to the Pathological Society of New-York, on the 8th inst., a specimen of more than ordinary interest. It represents the lower half of the spine and sacrum of a youth, 21 years of age, who suffered for about 18 months of caries in that organ, attended with consecutive absorption of the lumbar vertebræ, and who died with symptoms of retention of urea in the blood.

The history of the case does not furnish any reliable evidence as to the origin of the disease, nor has the post-mortem examination of the vital organs elicited any proof to that effect. This, however, does by no means diminish the importance of the specimen, as regards pathology in general, and spinal affections especially.

The specimen embraces the five lower thoracic, all the lumbar vertebræ, and the sacrum. On the outside, right and left, there are large cavities between the psoas and quadratus muscles, connected both with a carious ulcer of the spine and the surface. In its passage, the matter had superficially corroded the left transverse process of the third lumbar vertebræ. The left kidney was somewhat adherent to the spine by rigid and short fibrous bands; traces of fatty degeneration were also perceptible in that organ.

The spine itself, anteriorly and longitudinally divided, presented in its fresh state the following appearances: no engorgement of blood; no tubercular deposits; no ordinary signs of inflammation, nor any trace of inflammatory products; the fibro-cartilages were very much softened, being almost gelatinous, out of which oily and adhesive liquid could be squeezed; the color of both the cartilages and the infiltrated liquid was of a whitish tint. The elasticity of the cartilages had entirely disappeared; they were apparently of different consistence; nearer to the carious ulcer, appearing to be softer than the more distant. Between the second and third lumbar vertebræ they were carious, disintegrated, more superficial on the inferior surface of the second, but more substantial on the inferior surface of the third. In the centre of the third lumbar vertebral body, there was a small and movable sequestrum, and outside of that bone the commencement of an osteophyte became observable. The corresponding intervertebral cartilage was almost entirely destroyed, the anterior laminæ only being left; but those vertebral bodies had not approximated, being kept separated by the articular process. On the inferior surface of the eleventh thoracic vertebræ, about its centre, there was a small carious excavation surrounded by dense osseous tissue, (eburnated, Jones Tomes) and filled with an elongation of cartilage. Finally, it deserves to be mentioned, that the spine was almost straightened, the normal curves having nearly disappeared. This latter condition of the spine was by no means the effect of death, being found also in the cast, taken in plaster from the living patient by myself.

The microscopical examination, kindly aided by Prof. Alonzo Clark, presented the unmistakable marks of testural disintegration and fatty degeneration of the intervertebral cartilages in different degrees of advancement, from the breaking up of the fibrous texture, down to nucleated, elongated cells, corpuscles and fat globules; but there was no evidence of tubercular matter.

The nature of the case, and the peculiar pathological conditions of this specimen, give rise to most important considerations.

In the first place, it is of the utmost importance to determine whether the disease originated in the vertebral bodies, extending subsequently to the intervertebral cartilages, or *vice versa.* In examining this specimen, it strikes one forcibly that the carious destruction is not only of limited extent, and comparatively superficial, but is also confined to three vertebræ. Moreover, the caries, at the inferior surface of the eleventh thoracic vertebra, is in its incipient stage, presenting in its immediate vicinity eburnated osseous structure, which has been recognized by Jones Tomes as characteristic of the earliest phase of caries. The excavation is but trifling, and would scarcely receive a small-sized pea.

The remaining seven vertebræ were, to all appearance, in normal condition. But the intervertebral cartilage between the second and third lumbar vertebræ is almost consumed, the anterior portion only being left. And the other intervertebral cartilages, (notwithstanding that their corresponding vertebral bodies are in perfect integrity,) are disintegrated and degenerated to a greater or less degree, obvious to the naked eye, as well as to microscopical inspection. Had the bones been primarily affected, the disease of the cartilages would have been confined to the neighborhood of the carious affection, and the degree of disorganization of the former would bear comparison with the extent of caries.

According to Mr. Toynbee's researches (*Philosoph. Transac.*, 1841), the intervertebral cartilages are far less liable to spontaneous decomposition, absorption, and disintegration than the vertebræ; hence, it is not uncommon to find the intervertebral disks entire when the adjacent bodies of the vertebræ have been destroyed by disease. The specimen, however, exhibits the direct reverse. Again, it cannot be argued that caries of the lumbar vertebræ could become the proximate cause of degeneration of remote cartilages. Thus it is evident, that the latter have been primarily diseased, and that the vertebral bodies have been involved consecutively.

The next point of consideration is, as to the nature of the disease of the intervertebral cartilages in the present case. All that can be made out, in reference to the fibro-cartilages of the spine, is change of color, consistency, and organization, from the higher to the lower order, increase of saturation with serum, and the formation of fat globules.

There are no signs of ordinary inflammation either in the intervertebral disks or the adjacent parts. It is also doubtful whether the local pains which the patient suffered, were consequent upon the original disease or its ultimate effects, especially the formation of consecutive abscess.

Authors of note assert that cartilaginous tissue is not liable to inflammation, on account of not possessing blood-vessels and nerves. Later and more minute anatomical investigations have, however, shown that at least fibro-cartilages receive some minor blood-vessels, though they do not ramify in its parenchyma. But some modern writers entertain the idea that inflammation is but a perverted nutritive process, excited by morbid irritation. According to Redfern, Goodsir, Gurlt, Carpenter, Paget, Virchow, and others, cartilaginous structure, is just as liable to inflammation as any other, provided that the formative action is carried on by some means, though the signs of inflammation, and the subsequent structural changes are necessarily influenced by those peculiarities which the nutritive process present. Thus we find, in conformity with the observations of Redfern, Goodsir, and Gurlt, the inflammatory changes confined to the cartilaginous fibres and cells—the former broken down, partly dissolved and separated; the latter enlarged, deformed, the nuclei degenerated into corpuscles, and the hyaline substance infiltrated with serous fluid. In comparing those statements of the before-mentioned authors with the pathological peculiarities of the specimen under consideration, I am inclined to believe that a *low grade of inflammation* has been the nature of the disease. But, however opinions may differ on this point, it will be unreservedly admitted, that the character of that malady is debility, is minus of action, resulting in structural disintegration. And this is decidedly of great practical weight in reference to the treatment in analogous cases.

A third point worthy of discussion is the straight form of the spine. A straight vertebral column, at the age of twenty-one years, must be considered a deformity, for there should be two curves, respectively, in the thoracic and lumbar portions. This deformity is undoubtedly attributable to the entire loss of elasticity in the intervertebral cartilages, and at the same time to the recumbent posture the patient had adopted during the last fifteen months of his illness. In that position, the spine had but to yield to the weight of those organs which pressed upon it anteriorly, and to adapt itself to the mattress. To this circumstance may be attributed the absence of approximation between the second and third lumbar vertebræ, which would have been unavoidable in the erect posture. The fact that (according to the above statement) the spinal column had assumed a straight form, is a sufficient proof that the opposite deformity would have been acquired by the patient in the upright position. At this point I am naturally led to compare the views of Nelaton with the fact before the reader. This distinguished French surgeon states that posterior curvature and Pott's disease, are invariably the effect of tubercular deposits in the cancellated tissue of the vertebral bodies. Now this specimen is at least one of those exceptions, which I occasionally meet with. Posterior curvature of the superior thoracic portion of the spine not unfrequently occurs in apparently healthy, and even blooming children, at the age of three to six years, where no scrofulous or tubercular affection can be detected. There are no symptoms of inflammation;

the pain is principally peripheral either in the epigastric regions or in the lower extremities; the latter become occasionally paralyzed, owing to pressure upon the intervertebral nerves. The patients may become emaciated and assume the appearance of old people. The spine is unusually flexible, though not commonly, in the distorted portion, being kept stiff and immovable by dorsal muscles. Left to themselves those cases often recover, retaining, of course, a deformity of greater or less extent; the spines consolidate, and the patients may attain a considerable age, affected usually with asthma. But if a patient is kept for some length of time in a horizontal position, in the enjoyment of good air and food, the progress of that deformity will be arrested, and being suspended in an appropriate apparatus, head and legs being used as weights, the deformity will even diminish and the general health improve remarkably. Such cases I have had in my Institution, and the results of that treatment have proved highly satisfactory.

I do not conceive the possibility of bringing cases of this description in any relation to tuberculous deposits. Miliary tubercles, as long as they remain latent, will not interfere with the shape of the vertebræ, and can therefore not come under consideration as causes of spinal deformity. But if the tubercular deposits augment, gradually soften, and subsequently involve the surrounding cancellated tissue, inflammation and caries will ensue, constituting at once a malady that does not come under the series of posterior spinal deformities, which I have in view. Nor can it be comprehended, why a horizontal posture and horizontal suspension of the patient could arrest the progress of the disease, and diminish even its material extent, if tubercles had misshaped the vertebral bodies. For this reason, I believe that cases of this description have nothing to do with tuberculous disease, and must be considered as the simple effect of softening of the intervertebral cartilages, associated with loss of their elastic properties. These views I have entertained for a long time, but I have never before had the opportunity to corroborate them by post-mortem examination.

I consider, therefore, this specimen as one of the greatest pathological importance; for it confirms the occurrence of idiopathic disease of the intervertebral cartilages, and establishes the fact that the mere loss of elasticity becomes the source of deformity, and also that even caries may result from such pathological conditions. According to such facts, Nelaton's opinion requires its limitation. In fine, it can also be said that the much-applied local derivation can hardly give any hope of success, but must render the debilitated state still worse

BROOKLYN ORTHOPŒDIC INSTITUTION, March 2d, 1854.

Art. VIII.—*Practical Observations on the Use of Quinine and Opium in the Treatment of Hip-Disease.* By Nelson Nivison, M. D., Tompkins County, N. Y.

Among the various diseases that fall within the province of surgery, perhaps none are fraught with greater interest than those that pertain to the larger articulations. From the importance of these parts to the animal economy, from the peculiar character and conformation of the tissues involved, from the usually obstinate and intractable nature of the diseases themselves, and particularly from the diverse modes of treatment that at different periods have been advocated, this class of diseases has ever commanded and still claims a large share of the attention of the most eminent surgeons. Conspicuous among them are those of the ilio-femoral articulation; and of these probably none assumes a higher degree of importance than that usually denominated "Coxalgia" or "Hip-Disease." Under any system of treatment that has hitherto been devised, this disease is frequently unsuccessfully managed in its earlier stages, and, if allowed to proceed to those more advanced, is always lingering, generally extremely painful, and not uncommonly fatal. Under such circumstances, we conceive that any individual, who shall be able to reflect the most feeble ray of light upon a subject so obscure, will not have labored in vain. It is extremely probable that in our present effort we shall fail to do even this. We nevertheless propose to give the results of our experience in a few cases that have recently come under our observation. We shall indulge in no vague speculations, but content ourselves by a simple statement of facts, and such inferences as appear to be fairly deducible therefrom.

The first case that I shall notice was a child two and a half years old. I was called Oct. 18th, 1851. I got from the mother the following history: The child had usually been healthy till about six weeks previous to my visit, when it was attacked with a pretty severe fever of a remittent type, which lasted about ten days. A physician was called, who administered some mild remedies, under the use of which the febrile symptoms gradually subsided. The child, however, did not improve in appearance, strength, or appetite, but seemed rather to decline. In a few days after the more violent febrile symptoms had subsided, the child began to manifest symptoms of inability to walk or even stand, would fall frequently, and cry violently as if in severe pain; the sleep was disturbed, and the patient became rapidly emaciated. About this time, the left leg was observed to be somewhat bent at the knee, a day or two later at the hip, with considerable rigidity of the muscles. It would not allow the limb to be moved if possible to prevent it; every accidental movement was productive of much pain. At this stage of the matter, the mother had occasion to spend a couple of weeks from home; and, hoping the child might be benefited by the change, she took it with her. The symptoms grew worse. A physician was called. He pronounced it a case of hip-disease, and treated it accordingly; precisely what the treatment had been, beyond the application of a blister and some Dover's powders, I could not ascertain. Under the treatment, however, there was considerable amelioration of the symptoms. The child was brought home, and the treatment discontinued. In a few days all the unfavorable symptoms returned, with increased severity, and continued steadily to grow worse to the time of my visit. I found the little patient much emaciated, with a pallid countenance, a hectic flush on the cheek, and, although at the time sleeping somewhat quietly in the cradle, I noticed those convulsive twitchings, and distortions of the features, that told but too plainly of the violence already done to the integrity of the nervous system. Pulse small, quick, frequent, and somewhat irregular; the left thigh was drawn to nearly a right angle with the body, and the leg was flexed on the thigh. The whole limb was in a state of abduction; this, with a certain amount of apparent shortening, gave the limb somewhat the appearance of a dislocation, with the head of the femur on the dorsum ilii. The slightest movement of the limb awoke the patient, and his protracted cries were indicative of extreme anguish. I attempted to examine the limb, with a view to determine its true condition, but every movement so manifestly aggravated the sufferings of the little patient, that I was constrained for the time being to abandon it; but from the history and the appearances before me, I saw no reason to doubt the correctness of the diagnosis of the last medical attendant. The parents appeared healthy, but both acknowledged the strumous habit in their ancestry and family kindred.

In summing up the matter, the case appeared to be the sequel of an idiopathic fever, which appeared not to have been very thoroughly treated or satisfactorily overcome. While it existed in this form, it could, doubtless, have been completely removed by a liberal use of the sulphate of quinine. Now, if this diseased action is but a different manifestation of the same morbific agency, and no structural disorganization has yet occurred, why should it not now yield to the same remedy? True, a very considerable amount of inflammatory action, with its attendant fever, still exists, and, furthermore, the much respected authority of precedent would lend but little aid; I nevertheless resolved to give it a trial. I ordered a grain of quinine with ⅛ gr. of morphine to be given every six hours, with additional doses of a solution of morphine, if the pain is not entirely quieted and rest procured by the powders. A stimulating liniment was ordered to be rubbed on the affected part twice a day.

Oct. 20th.—The child has been much more comfortable; rested well, is less feverish, appetite slightly improved. At this visit, I was able to make a tolerably satisfactory examination of the affected limb. Considerable motion can be made at the knee, but no movement of the hip-joint can be borne. In whatever position the child is placed, the thigh remains at the same angle with the body. Continue the treatment.

Oct. 23d.—The symptoms all materially improved; no fever, appetite good, sleeps well, will allow slight motion of the hip-joint without much complaining. In addition to the former treatment, give iodide of potassium, and apply a blister to the hip.

Oct. 26th.—Continues to improve. Blister drew well, but produced considerable disturbance of the nervous system, which was soon quieted by additional doses of the morphine. Continue treatment.

Oct. 28th.—Still improving. Stomach and bowels somewhat irritable. Omit the iodide of potassium. Ordered quinine, gr. xvi., sulph. acid dil. gtt. x., aqua pur. ℥iv. m. A teaspoonful four times a day; an occasional dose of laudanum if necessary, to procure rest.

Nov. 4th.—Improving rapidly. The limb can be brought nearly in a right line with the body. Occasionally puts the foot to the floor and makes some rather unsuccessful attempts to walk. Continue the solution of quinine.

Nov. 11th.—The limb can be moved in almost any direction without pain. The patient can walk about the room; appetite continues good; he is allowed a generous diet, and is gaining flesh. Nothing of special interest occurred after this. The solution of quinine was continued a week or two longer, and the patient was dismissed cured.

Case 2 was a boy 12 years old. In the latter part of May, 1853, he was thrown from a wagon, by which accident he received considerable injury of the right leg, which appeared to be mostly in the vicinity of the ankle-joint; pain was complained of along the course of the fibula, and the parts were considerably swollen. But the affair was regarded as trifling, and, aside from the application of severe stimulating embrocations, and advising that the parts be kept at rest, nothing was done.

I heard nothing more of the patient till the 18th of June following, when I was called to visit him. I was told that he had suffered considerable pain in the limb most of the time since the injury; he had been able to walk but little. The swelling had nearly subsided, and the pain was now mostly in the vicinity of the knee; there had been more or less fever every day, generally worse on alternate days; he had passed restless nights, lost his appetite, and was losing flesh, and becoming peevish and fretful. He had a pallid countenance, a frequent pulse, and a furred tongue. The bowels being confined, I ordered a laxative, and agreed to see the boy the following day.

June 19th.—Was called early this morning to see the boy; found him complaining of excruciating pain in the knee and hip. I learned that he retired last night apparently as well as usual, and slept quietly during the early part of the night, but towards morning suddenly awoke, complaining of this intense pain, which had been unintermitting up to the time of my visit. The leg is now rigidly flexed upon the thigh, and the thigh on the pelvis, and the whole limb in a state of *abduction*, or drawn *from* the other. This position, I believe, is rather unusual in hip-joint disease. I notice, however, that Prof. March, of Albany, in his very valuable paper, read before the American Medical Association, mentions a case where the position of the parts was precisely similar. The boy refers the pain principally to the *knee*, and believes this joint to be the seat of the difficulty; fomentations have been freely applied to this part without relief. I found, however, that *motion* of this joint is less painful than of the hip. This directed my attention to that joint, and further investigation satisfied me that here was the real difficulty. The fact that the *pain* was mostly in the knee, rather confirmed this view of the case than otherwise, and again the previous constitutional disturbance had been altogether disproportioned to the slight injury in the vicinity of the ankle, and furthermore an inflammation of the hip-joint usually comes on rather insidiously. This, in connection with the fact that the boy was evidently of a strumous habit, could leave but little doubt that we had to deal with a case of hip-disease.

Being firmly impressed with the conviction that, in the former case, the sulphate of quinine, in combination with the opiates, were the chief agents in removing the morbid conditions of the system, upon which this species of diseased action usually depends, I determined to test it still further in this case. I therefore directed two grains of quinine, with a grain and a half of opium, to be given immediately, and to be repeated every six hours, and ½ gr. of morphine every hour till the pain is subdued.

June 20*th.*—The boy is more quiet, has taken the powders regularly, but was obliged in addition to take the morphine very freely. The limb remains in the same position, will admit of some motion at the knee, but the least movement of the hip-joint is exceedingly painful; considerable tenderness is manifest on pressure about the hip. Continue the powders. Rub the parts twice a day with comp. camph. liniment.

June 22*d.*—Yesterday the boy had an uncomfortable day, several paroxysms of pain occurred that were represented as almost intolerable; used the morphine very freely; slept a part of the last night rather quietly, but if he chanced to make the least movement of the affected joint, the pain produced thereby awoke him instantly, and he was usually unable to sleep again till the morphine had been repeated. He is comparatively comfortable to-day, the knee-joint can be moved without pain, but can bear no motion at the hip; countenance more animated, no fever, tongue cleaner, appetite somewhat improved. Owing to the extreme pain produced by change of position, the bowels have not been opened in several days. Continue the powders; give pill hydrg. gr. viii., at bed-time; follow with castor-oil in the morning.

June 24*th.*—The boy is better. When perfectly at rest complains of no pain whatever. Had one or two pretty severe paroxysms of pain yesterday; was obliged to use the morphine; with that exception, the powders of quinine and opium have kept him comfortable; will allow a limited motion of the hip-joint. The tenderness about the joint is diminishing. The knee is no longer painful, appetite good, tongue nearly clean. Continue the powders, apply a blister to the hip, and allow a generous diet.

June 27*th.*—Continues rapidly to improve; considerable freedom of motion is allowed at the hip; succeeded in bringing the affected limb nearly *parallel* to the other, without producing much pain. There is marked improvement of the general health; the morphine has been used but two or three times since last visit. Continue the quinine and opium.

June 29*th.*—Still improving. The limb can be restored to its natural position, and moved in almost any direction, with but trifling pain. Reduce the powders to ℞. quinine, opium āā. gr. j. mix., one every six hours.

July 4*th.*—The boy can walk about the room; but complains occasionally of an obscure pain in the hip-joint. Take a grain of quinine three times a day, with an occasional pill of opium if necessary.

July 10*th*.—The patient is apparently well; ordered some vegetable bitters, and discharged him. He has enjoyed good health up to the present time.

Case 3 occurred in August, 1853; the patient was a little girl about six years old. At my first visit, the mother informed me, that about two weeks previous, in climbing a fence, and endeavoring to reach the fruit of a cherry tree, she fell to the ground, striking upon the left hip; but beyond a slight limping, and occasionally a little pain, nothing of special importance occurred till the time I was called. I then found her complaining of excruciating pain in the left knee and hip; this pain had come on suddenly, and at first in paroxysms, but had now become constant; at each paroxysm the limb was drawn more and more from its normal position, and when I first saw it, it had assumed a position corresponding precisely with that of the last-mentioned case. The mother said she had always been a "weakly" child, and from appearances, I was satisfied that she was of the strumous habit. The subsequent history and treatment of this case correspond so nearly with the foregoing case that I deem it unnecessary to give the details. The only essential difference in the treatment was that this case was treated *exclusively* with quinine and opium; no counter-irritation or local treatment of any kind was made use of. The case terminated in health in about three weeks.

It is believed that a careful review of the foregoing cases will justify the following conclusions:

1st. That they were cases of genuine hip-disease in the early stages of development.

2d. That the removal of the diseased action was mainly owing to the free use of opium and quinine as remedial agents.

In regard to the diagnosis, we think, so far at least as the first case is concerned, very little doubt is likely to arise. And of the second and third, we know of no disease with which they would be likely to be confounded, unless it should be certain forms of rheumatism. That they were not rheumatic, we think, may be fairly argued, from the fact that they were evidently the result of local injuries, and that, although the pain was somewhat *migratory*, commencing in the ankle and knee before becoming fixed in the hip, which might be considered evidence of rheumatism; the facts nevertheless show that *motion* of the knee-joint, even while the pain was mostly confined to that situation, was far less painful than movement of the hip; thus indicating most clearly the latter situation as the real seat of the difficulty; and moreover, the *pain in the knee* is enumerated, by almost all writers on hip-disease, as one of the characteristic symptoms of its incipient stages. And furthermore, the fact that, after the acute pain in the hip had subsided, there was still great tenderness on pressure in the vicinity of the hip, which subsided only with the constitutional symptoms, would seem to leave little doubt of the true character of the affection.

Coxalgia, or hip-disease, I believe, is usually regarded as an inflammatory affection; the inflammation is, however, usually of an asthenic character. In order to its full development, some constitutional peculiarity, that shall operate as a predisposing cause, is believed to be requisite. That the strumous diathesis frequently constitutes this predisposition is, I believe, generally conceded. In addition to the predisposition, some well defined exciting cause may usually be recognized. All these conditions are present in the cases noticed. The symptoms were such as characterize the early stages of the acute variety of that disease; and it is extremely probable, had not the morbid train of symptoms been speedily arrested, that ulceration of the cartilages, extensive suppurations, anchylosis, or death, would have been the result.

In regard to the second position assumed, we may remark that, whatever be the diagnosis in these cases, they forcibly illustrate the importance of quinine and opium as remedial agents.

We believe a point has been reached in the progress of our science, in which a liberal use of quinine is no longer regarded as incompatible with every grade of febrile or inflammatory action. Neither is it necessary under these circumstances, in order to give a rational exposition of its *modus operandi*, to invoke its hyposthenic or sedative effects; for I believe it is beginning to be somewhat freely acknowledged that certain forms of inflammation are most successfully managed by a *tonic course of treatment.* Or rather, perhaps, it would be more correct to say that, in certain *constitutions*, almost any inflammation will admit of this course of procedure. I think I have seen cases of acute pleurisy, peritonitis, &c., more promptly and effectually subdued by a few *full doses* of opium or quinine, than they probably would have been by the lancet and its usual accompaniments; and the same is true of other forms of inflammation.

We believe that a deranged *innervation* often plays a more prominent part in the phenomena of inflammation, than has been generally believed; the immediate consequence of this derangement is a disturbance of circulation, of respiration and secretion; those parts of the organs already enfeebled, are of course capable of making but little positive resistance to an increased flow of blood, and an engorgement or congestion of the vascular tissue of the part is inevitable. Under these circumstances, to restore the *tone* of the discordant nervous system is manifestly one of the first indications. But this is not enough; we have likewise to deal with the consequences of its derangement. The circulatory system, stimulated by its impulsive promptings, has reached a high degree of excitement; this must be moderated and equalized. The sedative effect of the opium fulfils this indication. By a judicious combination of quinine with the opium, the two effects are produced simultaneously; and, by maintaining the action of the remedies, they may be prolonged indefinitely.

To treat the different varieties and stages of certain inflammatory affections successfully, by these remedies, requires a certain degree of boldness combined with much discrimination on the part of the practitioner. To be able to estimate, from the existing symptoms, the precise quantity of each that shall enter the combination to adapt it to a particular case, can only be learned by experience. In cases of severe pain combined with great nervous susceptibility, very large doses of opium will often be found necessary, and it is believed that doses that would be considered unsafe when given alone, combined with quinine, may be given with impunity. The proper dose will usually speedily moisten the skin, equalize the circulation, and eventually restore lost secretion. If the opium should be in excess or disproportioned to the quinine, along with a moist skin, we should probably have cold extremities, slow pulse, &c.; under these circumstances, we should not only diminish the quantity of the opium, and probably increase the quinine, but we may also, for the time being, resort to the more diffusable stimulants, as brandy, camphor, and ammonia. We may further remark that, adopting the tubercular hypothesis in regard to the *proximate* cause of this disease we think we may still philosophically account for the salutary operation of the remedies in question. It is probably generally conceded that no condition of the system is more favorable to the development of tubercle than one of decided *atony*, combined with extreme nervous susceptibility; and, for the removal of these conditions, we perhaps have no better remedies than quinine and opium. But with the pathology of this affection it is not now our purpose to deal. To determine to some extent the value of the remedies in question is our immediate object.

Whatever virtue we may assign to the quinine in the treatment of this disease, we believe the opium will generally be found to be an indispensable accompaniment; for, independent of its power to soothe the sufferings of the patient, and restore the equilibrium of nervous action and circulation, we believe one of its chief merits will be found to reside in its power to overcome inordinate muscular contraction. To do this effectually and continuously, has ever been considered a great desideratum among surgeons in the treatment of this affection. Indeed, the idea has obtained to a considerable extent, that little beyond this is necessary, in many cases, to effect a cure. This muscular contraction not only produces the deformity, but, by forcing the head of the femur firmly against the acetabulum, an aggravation of the inflammation, with a rapid absorption of the articular cartilages, must result.

The means usually made use of to overcome this forcible contraction of the muscles has been some form of extension and counter-extension by mechanical contrivances. Now, although, in the advanced stages of this disease, in order to accomplish the desired result, this kind of proceeding may be necessary, and, where judiciously used, is doubtless one of the most valuable auxiliaries to any system of treatment, yet we believe, in the earlier stages at least, the object is more certainly and advantageously obtained by the free use of opium; for, aside from the inconvenience and usual dislike of all sorts of apparatus, their effect is often positively injurious.

The muscles *resist* forcible extension and counter-extension. In other words, when any attempts are made forcibly to overcome their contraction, they act with redoubled force; and it is not till their power to contract is *exhausted*, that the benefits of extension and counter-extension begin to be realized. This forcible exhaustion of muscular power, independent of the additional irritation necessarily produced in the situation of the disease itself, and the violence done to the surrounding structures, cannot fail to draw heavily on the latent resources of the system, without which a cure can scarcely be expected under any system of treatment. This rigid muscular contraction is doubtless but the *reflection* of the impression made on the nervous centres by the painful sensations transmitted thence along the nerves of sensation. If this be true, it follows that, if by any means we can prevent the painful sensation from reaching the sensorium, we thereby likewise prevent the reflex action which would otherwise manifest itself in the form of this muscular contraction. The opium enables us to do the former, and the cause being removed, it is obvious that the effect must cease.

ART. IX.—*Case of Complete Prolapsus Uteri in Pregnancy—Safe Accouchement.* By N. CHAPMAN, M.D., Brooklyn, N. Y.

MRS. W., healthy, spare habit, and mother of three children, came under my observation during her second confinement. My attention had been called to nothing unusual in her case. I saw Mrs. W. on the 19th November, 1849; she remarked that her womb had been down for three weeks, with a constant bloody discharge, rather freer than the menses, but natural in appearance. For three weeks, she had been constantly on her feet attending to her household affairs. During the three weeks she had made many efforts to reduce the womb, which from its size and tenderness were ineffectual. I directed her to keep her bed till the next morning, and in the meantime foment the womb constantly, when I would call again and reduce it.

Nov. 20th.—On examination I found the womb of the size of the two closed fists, completely external to the body. My thumb and fingers could meet above its fundus, external to the vulva, having only the inverted vaginal walls and ligaments of the womb between them. When she was erect the womb must have extended nearly to her knees. At the time, I supposed the enlargement of the womb arose from its strangulation and congestion. It is proper to remark, that Mrs. W. said she had been subject since her first child was born to an almost constant prolapsus when she was on her feet, which she never before had found trouble in reducing. I affected the reduction without much difficulty; applied a compress over the vulva, with a T bandage, and directed her to get up after two or three hours.

Nov. 21st.—Immediately on Mrs. W.'s arising, the prolapsus recurred again. I directed her to lie down, and then found the womb more irritable and larger than before. I reduced it immediately, but with considerable difficulty and the exertion of some force. She was directed to keep the recumbent posture and use astringent injections; a putrid discharge followed and continued five days. On the 4th of December she felt life, fifteen days from the first reduction. After this time she was allowed to get up, and I discontinued my visits after the 8th.

On the 15th of March, I was called to Mrs. W. again. She said that she had continued feeling life stronger and stronger every day since I had last seen her; that the womb had been down many times since my last visit, but that she had been able to put it back; that now it was down much worse, and of greater size than ever before, and she could not reduce it. Besides, she had labor-pains that recurred every ten minutes. I found the fundus uteri as high as the umbilicus; the neck of the womb, external to the genital fissure, something larger than the two closed fists. Through the os uteri, I could feel the child's head resting on the rami of the ischium and pubis. As I failed to reduce the uterus while she lay in bed, I directed her to turn on her face, resting on her knees and shoulders, in which position I easily succeeded. On examination I felt the os uteri dilated to the extent of a circle two inches in diameter. The pains gradually subsided, and in two hours' time, the os uteri had contracted to the size of half a dollar.

On the 29th of March, she was taken in labor and delivered of a strong, vigorous female child, weighing six pounds. She must have been at her full term from the development of the child's head; the posterior fontanel was closed, and the anterior was no more open than usual. No prolapsus occurred during the labor, but the womb rested low in the pelvis. Mrs. W. said that the womb had come down every two or three days since the reduction in November, and also that in March, but that by lying down she could reduce it. Probably after the reduction in November the prolapsus was only partial. During her whole gestation, the child's head undoubtedly rested on the perineum, as she remarked that it always seemed to her that she sat on the child, when no prolapsus existed.

She was delivered 130 days after the reduction in November, consequently allowing 280 days for the term of gestation, she was in November advanced 150 days, or 21 weeks and three days, or about five months. At this time, it is to be recollected, when she was five months advanced in pregnancy, the womb had been completely external to her body, hanging nearly to her knees for the space of three weeks; and during this time she continued about her house every day, suffering nothing more than the inconveniences of dragging pains, the discharge, and the obstruction to walking, from the bulk of the womb and its tenderness.

The most important feature of the above case is, that a delicate woman, five months advanced in pregnancy, carried her child for three weeks external to her body; performed all her own house-work during that time, and neither miscarried or suffered much inconvenience, except soreness from the uterus being chafed.

Similar cases may, for ought I know, have been placed on record, but they must be of infrequent occurrence. They are instructive as showing the powers of nature to accomplish her purposes under the most unfavorable circumstances.

ART. X.—*A Case of Disarticulation of the Femur at the Hip-joint.*

By J. P. STEVENS, M.D., Ontario Co., N. Y.

MR. WM. ALDRICH of the town of Manchester, Ontario Co., about fifteen years of age, received in the year 1848, an injury of the left thigh and leg, which resulted in caries of the bones; commencing at the knee-joint, the disease extended gradually upward and downward, implicating eventually the greater part of the entire limb. The discharge of large quantities of pus during the last five years greatly enfeebled his constitution and undermined the general health. This condition of things seemed to demand the removal of the limb, as affording the patient the only hope of recovery.

Able counsel were summoned to the case, and coincided with this conclusion. Accordingly, on the 1st of Sept., 1853, Dr. H. A. Potter, of Geneva, assisted by Drs. Stevens, of the same place, and Howe, of Vienna, in the presence of several other physicians, performed the operation. The patient was brought under the full influence of chloroform, and the operation of amputation commenced.

As it was thought desirable to save the superior articulation of the femur, in order to facilitate the future adaption of an artificial limb, the point selected for the operation was about three inches below the great trochanter. The surgeon, therefore, proceeded to amputate the leg in the usual manner at this place. On the removal of the limb, the parts about the ilio-femoral articulation were sufficiently exposed to allow of a more satisfactory examination of the remaining portion of the femur. This was also found in a diseased condition like that already removed, the necrosis having extended up to the joint. On consultation, it was deemed advisable to complete the operation by the entire removal of the head of the femur from its socket. This was accordingly undertaken and accomplished without much difficulty. The cotyloid cavity was found free from disease. The flaps were brought together, and the appropriate dressings applied.

The case progressed favorably, the wound healing promptly and with no more than the ordinary amount of suppuration. It is now a little more than four months since the operation was performed, and the parts have entirely healed; the patient has recovered his former flesh, and is in the enjoyment of good health.

This was a case of true amputation of the hip-joint, in the completion of the operation, though not anticipated in its commencement.

PART SECOND.

CRITICAL ANALYSIS.

ART. XI.—*Traité des Maladies du Sein et de la Région Mammaire*, par A. VELPEAU. Membre de l'Institut (Académie des Sciences) et de l'Académie Impériale de Médecine, Professeur à la Faculté de Médecine de Paris, Chirurgien de l'Hôpital de la Charité, etc. Paris, 1854. (*A Treatise on the Diseases of the Breast and of the Mammary Region.* By A. VELPEAU, Surgeon of the Hospital of La Charité, &c., &c. Paris, 1854. pp. 727. With Plates.)

The Diseases of the Breast, and their Treatment. By JOHN BIRKETT, Fellow of the Royal College of Surgeons of England, Fellow of the Linnæan Society, and Assistant Surgeon to Guy's Hospital. (*The Dissertation to which the Jacksonian Prize for* 1848 *was awarded by the Council of the Royal College of Surgeons of England.*) London, 1850. pp. 264. With Plates.

THE volumes before us are the productions of two surgeons of widely different reputations on this side of the Atlantic. One is from the pen of the world-renowned Surgeon of La Charité, and contains the results of his extensive experience for more than thirty years; the other comes to us with the seal of approbation of the Royal College of Surgeons of England, having obtained the Jacksonian Prize for 1848. For some years past Mr. Birkett has been one of the contributors to Guy's Hospital Reports, but as its circulation is limited in this country, as a necessary consequence, his name is far less familiar here than that of M. Velpeau. However, the position to which he has recently been promoted, as the successor of the late lamented Bransby Cooper, Lecturer on Surgery at Guy's Hospital, will doubtless add to his celebrity. In his preface he states that, through the kindness of many friends, and his connection with Guy's Hospital, which is one of the largest and most richly endowed in Europe, opportunities on a large scale have occurred to him to examine, as minutely as possible, those morbid growths to which the mammary-gland is liable. His avowed object is the instruction of his junior brethren; and if he has been rather prolix in the description of their minute anatomy, he trusts that "the fault may be forgiven, and that the reader will attribute this, I hope, pardonable occupation of his time to a desire to render the explanation clear, and the identification of similar structures of easy attainment." One of the most important practical points connected with the study of the diseases of the breast is, certainly, the identification of their benign or malignant character; and notwithstanding the microscopical researches of Müller, Gluge, MM. Robin, Lebert, Bennett, and others, if the opinions of M. Velpeau be true, we must surrender our faith in the power of this instrument to establish absolutely the differential diagnosis of the genuine and the pseudo-cancerous tumor. In his preface he boldly asserts that, since 1830, he has lost no opportunity of subjecting mammary tumors to examination with the microscope, and he candidly admits that, as yet, he is not in the possession of a sufficient number of unequivocal facts to serve as a basis of an unobjectionable classification of these tumors. Moreover, he believes that he has incontrovertibly proved: 1, that the so-called cancer-cell is not the specific element of cancer; 2, that genuine cancerous tumors may exist without this cell; 3, that this cell has been found in non-cancerous growths. In arriving at these conclusions, he availed himself of the same means employed by M. Lebert himself; for the last-named author based many of the observations contained in his *Physiologie Pathologique*, and his *Traité du Cancer*, on the analysis of a large number of tumors removed by the surgeon of *La Charité*. Consequently both observed the same facts, but in their interpretations of these facts they differ. Had M. Lebert confined himself to the simple announcement of the existence of certain forms of globules in these tumors,—in a word, if he had kept within the bounds of pathological anatomy,—M. Velpeau would have been under no necessity of rejecting his conclusions, theoretical or practical, on the subject of the cancer-cell. He comments, at considerable length, on the course pursued by MM. Lebert and Robin, though he would by no means wish it to be supposed that he considers the microscope of no value in assisting our diagnosis. He admits that this instrument has been the means of bringing to light important facts, but it is the interpretation or application only of these facts which he is disposed to call in question. He is willing even to acknowledge that a notable difference exists between the so-called cancer-cell and that which is found in tumors of a non-malignant character. But this cancer-cell is not the *sine qua non*, the initial element of cancer.

Other points are noticed by our author in his somewhat lengthy preface, but these will be referred to in another place.

The work of M. Velpeau is divided as follows: in the first place, we have the diseases of the female breast, the non-malignant affections, including the inflammatory and the non-inflammatory; and, secondly, the malignant diseases of the female breast. Then follow the non-malignant and the malignant affections of the male breast; and the work is concluded with some remarks on the diseases of the breast in infants and children.

The following is Mr. Birkett's arrangement:

1. The diseases *before* puberty. 2. The diseases *during* the establishment of puberty. 3. The diseases *after* the establishment of puberty, including those which occur during pregnancy, the puerperal period, and lactation, or at any period or age after puberty.

In our analysis of these volumes, we shall follow the order of arrangement adopted by the French surgeon.

By the term, benign affections of the breast, M. Velpeau would designate those which, if left to themselves, would not destroy the patient, or which have a natural tendency to a spontaneous cure. Of these he would make two groups: one embracing the different inflammatory affections; the other, those which are originally, or in their progress, unaccompanied by inflammation.

Nearly all of the inflammatory affections of the nipple are confined to the puerperal state. There are some, however, which occur independent of these conditions, such as eczema, excoriations, fissures, &c. Several interesting cases are related, but we shall refer to only one, in which the eczematous affection seemed to be developed under the influence of constitutional syphilis. This patient was twenty years of age; the nipple and areola presented a well-marked coppery red tint. The surface was moist, and there was a constant exudation of a reddish humor, which speedily dried into sallow-colored crusts. This affection was of some six or eight months' standing, and had not changed its aspect from the commencement. Five months before, she had been treated at the *Hôpital du Midi* for well-marked syphilis. The eczema resisted all topical applications, but yielded, in the course of two months, to pills of the proto-iodide of mercury.

Some few years since, we treated a case of this kind, which had been pronounced by a physician to be carcinoma!

Among the topical applications recommended by our author, in cases unconnected with a syphilitic taint, are the following:

	Axung. washed in rose-water,	℥ iii.
	Sod. Bi-Carb. or Calc. Sulph.,	grs. viii M.
Or,	Cerate Simpl.,	℥ iii.
	Calomel,	ʒ i.
	Camph.,	grs. iiiſs M.

The crusts having been detached by the application of fresh butter, or a linseed poultice, the red surface is to be carefully covered with one of the above ointments, or, what is preferable, an ointment composed of fresh butter and powdered sulphur. Should these means fail, the whole of the affected part may be touched with the nitrate of silver three or four times in the course of the day. With the topical applications, general baths, mucilagenous, sulphurous, or alkaline, should be employed. Internal treatment should not be neglected.

In the treatment of fissures of the nipple, he denounces the lotions of bi-chloride of mercury used by some surgeons, as the child may suffer seriously if but the smallest particle of this substance remain on the surface or in the fissure. The tincture of catechu he has not found of great service, but slight cauterizations with the nitrate of silver have proved quite efficacious. Should the disease affect a large extent of surface, a solution of this substance may be employed. Mr. Birkett also considers the nitrate, when endurable, a valuable remedy, but he remarks that its use is attended with great pain, although, after a second and third time, it is not so severe as on the first trial. Collodion is regarded by both our authors as an useful application; the kind of artificial epidermis which it forms affording protection to the skin, and permitting the fissures to heal undisturbed by the sucking of the child. As a general rule, M. Velpeau thinks it is better for the mother to continue suckling her child, as the engorgement of the breast, consequent on the discontinuance of this act, is calculated to exasperate the disease. Even when one breast only is affected, lactation in this should not be suppressed. But if the woman suffer too severely, and the child become emaciated, another nurse must be procured.

Deep-seated Mammary Abscess.—He refers to the anatomical arrangement of the parts, by which a kind of synovial cavity is formed between the mammary gland and the pectoralis major, and other coverings of the chest. This sac was first noticed by M. Nelaton, and is found principally in women whose breasts are voluminous, movable, and heavy, who have nursed many children, and may become the seat of various kinds of effusion and phlegmonous affections. In consequence of their remote situation from the skin, local applications in the shape of ointments, cataplasms, &c., are of but little avail; general treatment is therefore required, and he has seen the happiest effects from the use of calomel, and tartar emetic in large doses. Purgatives also are indicated. Should the inflammation not yield to the above measures and to blood-letting in the course of four or five days, suppuration is sure to occur, and exit must be given to the matter by free incisions. Mr. Birkett directs that pressure should not be used upon the part to expedite the flow of pus, but the opening ought to be sufficiently extensive to admit the ready efflux of the fluid, and perhaps somewhat solid contents. Lint, moistened with warm water, may be applied, and upon the second or third day, the breast must be strapped up with plaster, and well bandaged. Should the patient become debilitated by the long-continued discharge, of course a generous diet must be prescribed.

M. Nelaton has published some interesting observations in the *Rév. Med. Chir.*, No. xiii., 1853, on the etiology of mammary abscesses, and he remarks, in relation to the diagnosis, that it may be laid down as an absolute rule, that whenever a puncture, after having at first furnished pure healthy pus, yields a sanguineolent pus on compression two days afterwards, the fluid taking on a bloody appearance without obvious cause, a second abscess has become developed in the vicinity of the first. By a little attention, this second tumor may be detected. The wall interposed between the two collections becomes the seat of great turgescence, and of a considerable efflux of blood, and a sanguineous transudation takes place ihto the first cavity. (*Ranking's Abstract*, No. xviii., p. 190).

Nearly 200 pages are devoted by M. Velpeau to the subject of the various phlegmonous affections of the breast, and the chapter is concluded by a statistical *résumé* of some 200 cases treated under his supervision since 1834. Of these 3 died; 139 were cured; 28 imperfectly cured; 5 left the hospital uncured; 21 were complicated with erysipelas, axillary abscess, abscesses in the neck and on the back; variola, pleurisy, phthisis, eczema, erythema, and gastric irritation. The right breast was the seat of the disease in 75 cases; the left, 75; both, 23 cases. Between 15 and 20 years of age, there were 20; between 20 and 30, 116 cases; 30 and 40, 23 cases; 40 and 50, 5 cases; 50 and 60, 3 cases.

Thirty-seven were subcutaneous abscesses; deep-seated, 38; parenchymatous, 95; not specified, 6. Of the causes, 20, from contusion;

3, eczema; 7, pregnancy; 110, puerperal state; 2, chaps or fissures; 1, needle; 6, cold.

The very small number produced by chaps or fissures would seem to disprove the opinion of M. Nelaton, as expressed in the paper to which we have already referred. He believes that mammary abscesses are very often due to the existence of chaps or sores on the nipple, the irritation being propagated along the lymphatics of the organ, just as a wound of the foot or hand will give rise to an inflammation in the vicinity in the glands of the groin or axilla. Once excited in the breast, the inflammation may become speedily propagated to the deeper parts of the organ. He refers to M. Sappey's preparations of the lymphatics, which exhibit the great abundance of these vessels, nearly all of which take their origin at the nipple or areola, and ramify from this common centre in all directions along the fibrous partitions of the gland. He also asserts that when the chap is situated at the upper part of the nipple, the inflammation will usually be found at the upper part of the breast, &c., &c.

But we must pass to Chapter II., which treats of affections of a benign or indolent nature. The following is M. Velpeau's classification:

1. Hypertrophy . . . .
   - *a.* of the gland,
   - *b.* of the cellular tissue,
   - *c.* of the adipose tissue.
2. Engorgements . . .
   - *a.* of the cellular tissue,
   - *b.* of the glandular tissue.
3. Cysts . . . .
   - *a.* sebaceous,
   - *b.* gelatinous,
   - *c.* sanguineous,
   - *d.* milky.
4. Tumors . . . .
   - *a.* lipomatous,
   - *b.* fibrinous,
   - *c.* butyreous,
   - *d.* tuberculous,
   - *e.* osseous,
   - *f.* granular or nodular,
   - *g.* adenoid, or the so-called partial hypertrophy.
5. Imaginary tumors.

Of these various affections, we can notice but the cystic tumors, or the hydatid tumors of Sir Astley Cooper and Dr. John C. Warren, the carcinoma mammæ hydatides of Sir Charles Bell, the sero-cystic of Sir Benjamin Brodie, and the unilocular or multilocular cysts of French writers. Mr. Birkett has devoted particular attention to this subject, and, previous to the appearance of his present volume, had published some interesting observations in *Guy's Hospital Reports*, October, 1849. The conclusions to which he has arrived are directly at variance with those entertained by Sir Benjamin Brodie. The following are his views, based upon a careful examination of these growths:

1. "That the lactiferous ducts are liable to dilatations resembling cysts; that this morbid condition stimulates more important diseases; hence, this suspicion being excited, the excision of the tumor has been resorted to.

2. "There is no evidence to prove, from minute examination, that the growth within the ducts enjoys any characters in common with either the cysto-sarcomatous or carcinomatous new formations; and,

3. "That this morbid condition belongs to the class of the non-contaminating diseases."

The morbid action which produces these tissues, he believes to be as follows: "In the first place, an excess of secretion takes place in the duct, which, from some cause or other—malformation of the nipple, or obstruction of the duct by pressure—does not flow away spontaneously, although it may perhaps be made to ooze out. The fluid becoming absorbed, the more solid material, the epithelium, remains behind, leaving a coherent mass of more or less solidity. This body may cause irritation, an excited action is induced, blastema is effused, and nucleated cells, which attain a degree of fibrillation, are formed; hence the appearance of organised growths found in the ducts."

A section of the distended ducts, he states, presented the appearance of a section of congeries of varicose veins with their smaller branches, and contained coagula. Indeed, it is a kind of varicose condition of the ducts, with partially organised contents, and the remains of that secretion which they are intended to convey. Mr. Birkett's remarks are illustrated by diagrams, which greatly facilitate the comprehension of his views.

M. Velpeau asserts that, although Sir Astley Cooper and Dr. Warren may really have seen hydatid tumors of the breast, it is probable that more than once they have confounded the simple serous cyst with this disease. He then asks, How is it that two surgeons of so extensive a practice, and such a long experience, have not met the proper cystic tumors of the breast, when they have met with the hydatid disease so frequently, whilst he himself has never observed the genuine hydatid affection, but a large number of different kinds of cysts? He would not deny the existence of the hydatid disease, but would simply maintain that it is less frequent than one would suppose from the writings of Sir Astley Cooper and others.

Sometimes these cysts contain new growths, in which both a fluid effusion and a solid formation simultaneously exist, constituting what is known by the name of sero-cystic sarcoma; and not unfrequently this kind of growth is supplied by a large vessel, or even two or three large arteries, which may bleed very freely during their extirpation with the knife. An incision followed by pressure may occasionally prove of service, but both of our authors agree that amputation of the breast, or of the morbid growth alone, is the only means by which the patient can be relieved from the fears excited by the existence of the tumor, although the constitution is never contaminated by these growths.

Some twelve years since, we saw, at the Clinique of the College of Physicians and Surgeons of this city, a case of galactocele of enormous size. Prof. Parker punctured it with a trocar, and drew off three quarts of milk. It was punctured twice afterwards. This case is reported in the *New-York Medical Gazette*, January, 1842. Scarpa, in a similar case, drew off five quarts of pure milk! The report of it is copied by Mr. Birkett from the *Opusculi di Chirurg.*, t. ii., of the distinguished surgeon of Pavia.

We come next to the second part of M. Velpeau's volume, which treats of the malignant or cancerous affections of the breast. Cancer of the breast being the most common of all the forms of carcinoma, gives to this part of the subject an unusual degree of interest. We have here three principal forms of cancer: the scirrhous, encephaloid, and the fibro-plastic; melanosis, keloides, and the epithelial form, are very rare.

Scirrhus presents itself under different aspects, such as the ligneous, lardaceous, infiltrated, &c., all of which may be united in the same breast, or be encountered separately. Under the term ligneous cancer he would designate that kind of tumor in which the predominant characters are density, the firmness of wood, without fixed limits, and diffused in the surrounding tissues. But our space is too limited to follow our author through all his observations upon the different forms presented by this disease, and we must confine our attention to his remarks under the heads of diagnosis and treatment. For more than thirty years, he has labored to add to our means of diagnosis; chemical analysis has proved of no avail; the microscope and clinical observation, however, have not been quite so barren in their results. In the commencement of our analysis of these works, we alluded to the conflicting opinions entertained by M. Velpeau and M. Lebert, in relation to the *cancer-cell*, and we here find him devoting some 23 pages to the microscopical anatomy of cancer. He quotes from Vogel the following remarks, to show the present state of the question, according to the admissions of the micrographers themselves:

"The histological characters of cancerous tumors vary considerably, and not unfrequently they differ in various portions of the cancer." (Vogel, p. 266.) He then asks, Do cancer-cells contain elements distinct from those which exist in the organism in its healthy state? This the German histologists, Müller, Vogel, and Virchow would seem to deny. Dr. Bennett, of Edinburgh, admits an analogy between the normal cells of the liver and the microscopical elements of cancer of this organ. After noticing the conflicting statements of different micrographers, he observes that he has seen the so-called *cancer-cell* in tumors of the non-malignant character, of which there could be no doubt. In 1851, he removed a portion of the os calcis and of the heel, which for a long time had been affected with caries and a fungous degeneration of the tissues. Mr. Broca, who examined these fungous growths with the microscope, found them filled with the cancer-cells. The wound healed; the health of the patient became perfectly reëstablished, and M. Velpeau has no doubt of the innocent nature of the disease. He gives also in detail the particulars of a case in which he removed an adenoid tumor from the breast, in which MM. Follin and Lebert detected a certain number of cancerous or encephaloid cells, and yet this was a benign affection.

The following are M. Velpeau's conclusions upon this subject: Every form of cancer of the breast may be included under the terms encephaloid, scirrhous, chondroid, melanotic, and epithelial cancer. He is unwilling to admit that a homologous cell—the epithelial cell which enters into the composition of the normal tissues, which forms the epidermis, warts, corns on the feet—is the fundamental, the specific element of growths so incontestably malignant as are the cancerous tumors.

Mr. Birkett, on the other hand, boldly asserts that "the minute anatomy of carcinoma is so distinct and peculiar, so totally different in almost every respect, from that of any other tissue of the body, and the elements of which this tissue is composed are so characteristic, that the identification of a growth of this nature no longer remains a matter of uncertainty or doubt," p. 212. At page 242, he observes: "But since I have so positively asserted the specific character of carcinoma, as well as the possibility of its identification, it becomes necessary, in justification of this position, to add what I have myself observed." These appearances, he admits, are so variable, depending upon so many accidental circumstances, that we rarely meet with two precisely alike. The essential elements, however, of carcinoma, are nucleated globules and a fibre. After perusing the thorough analysis of this subject by M. Velpeau, we must confess, that, henceforth, we must attach less value to these "nucleated globules and a fibre," than does Mr. Birkett. M. Gerdy, in his *Chirurgie Pratique*, tom. ii., 2d part, p. 405, after describing the various appearances presented by the microscope, thus remarks: "Tant de variétés ne donnent guère de *l'unité*, à mon sens, à l'élément special du cancer, et ses analogies avec le globule fibro-plastique l'en distingue souvent assez mal."

In the treatment of cancerous tumors of the breast, we find the following plan laid down by our author, as that in which he has most confidence. From 6 to 12 leeches are applied, not to the breast, but towards the axilla, once in 15, 20, or 30 days. The soap plaster, cicuta plaster, or emplastrum de vigo, is applied so as to cover the affected part, the former being changed twice a week, the latter only every eight days. Instead of these plasters, he frequently prescribes free inunctions with an ointment of the iodide of lead, or with the mercurial ointment, or an ointment of the iodide of potassium, the quantity of the iodide being small. Mucilaginous baths, rendered alkaline by the addition of the salts of potash or soda, or even a certain quantity of soap, are useful adjuncts.

Internally, he prefers the iodide of potassium, or the cod-liver oil, to the preparations of cicuta. All saline, spicy, or acid substances are to be avoided, in the way of food. A purgative to be administered every eight or fifteen days. Compression, though useful in benign tumors, he thinks, may prove injurious in those of a cancerous nature. Mr. Birkett disposes of the medical treatment in a very few words: "So far as the administration of drugs is advantageous in the restoration of the general health, there can be no doubt of their utility; but it must be confessed, that at present, no method is known by which the disease can be eradicated, if there be evidence of the constitution having become affected."

The question of *surgical* interference of late years has been much discussed, and it is still agitating the minds of the profession. According to some, an operation but accelerates the fatal termination. Others boast of a success truly astonishing. The American Medical Association, at one of their late meetings, appointed a committee to report on the results of surgical operations in malignant diseases. A most admirable selection of chairman of this committee was made, viz., Prof. Gross; and in his most able report, he has thoroughly examined the facts which bear on either side of this question. (*Transactions of* *the American Medical Association*, vol. vi., 1853.) After passing in review the opinions of many of the most eminent of European and American surgeons, he comes to the general conclusion, that excision, however early and thoroughly executed, is nearly always, in genuine cancer, followed by a relapse at a period varying from a few weeks to a few months after the operation. Those desirous of becoming fully acquainted with the present state of our knowledge on this subject, cannot do better than to study the above report, by the distinguished surgeon of Louisville.

M. Velpeau asserts that both observation and statistics, prove that the extirpation of tumors of the breast is not always followed by a relapse, and is not always useless or injurious. Again, a large number of facts in his own experience incontestably demonstrate the possibility of a radical cure following the operation in cases "les mieux conditionnés."

Mr. Birkett remarks that we must be guided by the stage of development, as well as the constitutional condition of the patient, and by the period of time the growth has been forming. If cases of acute carcinoma are meddled with, they are sure to be followed by a relapse; if those of a chronic character, the patient may enjoy almost certain freedom from the disease for some years.

As to the propriety of repeating the operation in cases of a return of the disease, M. Velpeau refers to a most remarkable example, in which M. Roux is said to have succeeded in effecting a cure even when the tumor had re-appeared for the sixth time. This case is reported in the *Bulletin de l'Académie de Médecine*, t. ix., p. 595. The first operation was performed in 1842, the last in 1852. He thinks there can be no question that in this instance life was prolonged by the successive operations which were performed. Mr. Birkett, on the other hand, believes that little hope remains of the prolongation of the patient's life by a second operation, but the perusal of other cases detailed by M. Velpeau is calculated to produce a very different impression.

The case of M. Roux, above referred to, is with the exception of the seat of the disease, analogous to one related by Prof. Gross in his report, in which the writer with other surgeons, prolonged a man's life by repeating the operations for the excision of the lip and lower jaw, involved in carcinoma. Life in this case was prolonged from 1844 to 1851, and in the opinion of Prof. Gross, it is one of the most remarkable on record.

Mr. Birkett has seen but few cases of cancer of the breast in the males; indeed, he mentions but one, which was removed by Mr. Callaway. M. Velpeau has seen nine or ten cases; others have been reported by MM. Sedillot, Petrequin, Dr. Walshe, and Dr. Warren. The writer has seen two intances of the kind, one at the Pennsylvania Hospital, the other at St. Bartholomew's, London. In 1853, we assisted Dr. Van Ingen, of Schenectady, in the removal of a fibro-plastic tumor in the mammary gland of the male.

We have already extended our analysis of these works to such a length, that we must now bring our remarks to a close. The reader can form but a very imperfect idea of their merits from our selections from their pages. Either volume is far more complete than the celebrated work of Sir Astley Cooper, which, as is well known, did not embrace the subject of the malignant affections of the breast, nor could it have furnished us with the light so recently shed by the microscope on the minute anatomy of mammary tumors. In those now under consideration, the student and the practitioner may find all of importance which the present state of our science can boast. The volume of Mr. Birkett needs not our humble commendation, after having received that of the Council of the Royal College of Surgeons of England, whilst that of the celebrated surgeon of La Charité requires but to be read to be justly appreciated. Its appearance in an English dress could not fail to be most cordially welcomed by those unable to read it in its native language.

G. C. B.

Art. XII.—*A Treatise on Acute and Chronic Diseases of the Neck of the Uterus.* Illustrated with numerous Plates, colored and plain. By Charles D. Meigs, M.D., Professor of Midwifery and the Diseases of Women and Children in Jefferson Medical College, &c., &c. Philadelphia: Blanchard & Lea, 1854. 8vo. pp. 116, plates 22.

A Practical Treatise on Inflammation of the Uterus, its Cervix and Appendages, and on its Connection with Uterine Disease. By James Henry Bennet, M.D., Member of the Royal College of Physicians; late Physician-Accoucheur to the Western General Dispensary, &c., &c. Fourth American, from the Third and Revised London Edition. Philadelphia: Blanchard & Lea, 1854. pp. 430.

The diseases peculiar to females will ever merit and receive a large share of attention from the general practitioner of the healing art; but, were not the pathology of these Protean maladies more enlightened and progressive than it was previously to the investigations and writings of Sir Charles Mansfield Clark, M. Récamier, and Mme. Boivin, charlatans and nurses might still have continued in full control of this their favorite and most lucrative department of *practice*, to the discredit of science, and the injury of the fairest and better portion of humanity. But thanks to the labors of such men as Récamier, Gibert, Kennedy, Montgomery, and Bennet, our knowledge of uterine pathology has received the form and certainty of a true science; the history and symptoms of the diseases peculiar to females may now be understood and properly analyzed, and appropriate remedial agencies applied. The pallor and debility of despairing female invalids may now be exchanged for health and vigor; vexatious and distressing bodily and mental suffering, and premature decline, are by the scientific physician readily arrested, and the natural tone and vivacity of health restored.

As the respected authors, whose names stand at the head of this article, lay claim to the honor of being foremost among uterine pathologists, in their respective countries, we are happy to see new editions of their labors laid before the profession at the same time.

The treatise by Dr. Meigs is presented to the profession as the result of that popular professor's extensive clinical observation and experience in the treatment of maladies affecting the cervix uteri. Prepared, as it was, as an erudite report to our great National Association, by special appointment, the profession had a right to expect an elaborate and complete *resumé* upon the subject. And these anticipations were greatly augmented when the worthy Treasurer of the Association, at its last meeting, based his successful appeal for largely increased means, for the publication of the Transactions, upon the great extent and excellence of his learned *confrère's* forthcoming report, the materials for which, as he stated, had been accumulating for many years, and the illustrations for which would be new and immensely important, as well as expensive.

Of the manner in which these high anticipations have been met, and of the actual merits of the work, every intelligent physician will be apt to judge quite as correctly as the gentlemen who labored to give special prominence to the report of the committee, represented by the amiable teacher of obstetrics in the Jefferson Medical College. But we do not propose to discuss any questions which may possibly stand connected with the historical origin of the enterprise of bringing before the world the immense treasures of clinical experience and profound erudition, which appear in this report; for upon this subject we "know nothing." Dr. Meigs has executed his work in "character," indulging in his peculiar desultory style of writing and of reasoning, and adducing new and striking illustrations of the fertility of his own genius and his peculiar dialect of our mother-tongue.

Dr. Meigs commences his report by stating the necessity which exists for the publication of such a treatise as that which he has written, modestly asserting that "it was to be expected that the labors of ingenious men, devoted to this species of research, should, by this time, have placed all questions in this kind of practice so fairly before us, and with solutions of the various problems so clearly exposed, that there could be no farther real necessity for making public one's, "observations or reflections."

He then proceeds to discuss *in extenso* the questions of propriety and morality which have been raised by the fastidious concerning the employment of the *speculum* and *toucher*, and he concludes that "we do not find ourselves called upon to discountenance and reprobate the prudent and necessary employment of modern methods and instruments invented to improve the means both of diagnosis and surgical treatment of diseases of the cervix uteri; conceiving that this is a matter to be left to the conscience and judgment of our brethren whenever the occasion may arise."

Our author opens his remarks on uterine pathology in the following language:

> The reactions of the reproductive organs upon other members of the animal economy are known to be both diverse and comprehensive; nor is it difficult to perceive that this should be the case, seeing the great importance of their functions. One could hardly suppose, indeed, that a system of anatomical tissues, representing the complement of the vital powers, could be an *indifferent* in their constitutional reaction. The powerful sway they exert upon not only the physical, but the psychical condition and nature of the woman, might well persuade us that changes in their vital *status*, even such as are inappreciable, except by the reason, should greatly affect both the body and mind of the woman. * * * * A dark and mysterious veil hides from us many of the laws that grow out of the intimate relations and mutual dependency existing between the conservative or generic forces of animals, and their reproductive or genetic powers. Many stumbling-blocks in the path of the practitioner would be taken away, if these laws and relations could be fully understood, and we should then be able to take more precise indications, and adopt more positive methods of treatment.

Concerning the nature and origin of malignant diseases of the uterus, our author propounds the following statements, which, if strictly true, would certainly simplify our views of the histology of such affections:

Unequable development of the several elements converts the womb into a tumor, degenerates it, and renders it incurable by medicines; whereas, the state of pathological hypertrophy is one to be recovered from upon removal of the cause.

If in the womb, the areolar, or the vascular, or the nervous element should be augmented several hundred per cent. beyond its normal ratio, the rest of the tissues preserving their quantitative relations to each other, the viscus would be changed into a hæmatoma, a cephaloma, &c., &c., according to the nature of the case or chief constituent element of such tumor.

Unhappily the womb is, by nature, peculiarly subject to such changes.

Concerning the nature and the relations of leucorrhœal discharges, Dr. Meigs justly remarks, that "the most mischievous of leucorrhœal secretions is that which comes from the canal of the cervix of the womb." But we think that the following statements, concerning the pathological relations and indications of the different varieties of these discharges, though strictly correct so far as relates to the secretion when *fresh* and *in situ*, are calculated to mislead the physician who would base a diagnosis upon the definitions given by our author. He remarks, that "the muciparous glands of the vagina furnish either a thin watery mucus, or else one of a creamy consistence, which, in other instances, appears to be butyraceous, or concrete. The excretion from the glands of the canal of the neck, however, is always gluey or albuminous, and resembles fresh white of eggs."

Now, it so happens, that in a majority of the cases of inflammatory affections of the cervix uteri accompanied by leucorrhœa, the patient seldom, if ever, notices any other than the opaque, creamy, or concrete variety of discharge. So true is this, that Sir Charles Mansfield Clark, one of the most careful observers who has ever written upon uterine pathology, considered the white, opaque, and amyloid mucous discharge a very important and characteristic indication of inflammatory disease of the cervix, believing that this kind of discharge originated in the glands of that organ. He states that this opaque amyloid discharge "belongs to one condition of the uterus only, and that it characterizes that condition with marked constancy." From very extensive observations, we are satisfied that Mr. Clark's observations on this subject are mainly correct so far as the pathological relations of the discharge are concerned, notwithstanding some obvious errors. The experiments of M. Donné, Mr. Whitehead, and Dr. Tyler Smith have demonstrated the fact that the ropy and transparent mucus which is the characteristic secretion of the glands of the canal of the cervix, is readily and quite certainly transformed into the opaque, creamy, or curdy discharge, which is the most frequent form of leucorrhœa, and which Dr. Clark has asserted to be characteristic of inflammation of the neck of the uterus.

The practical importance of these facts, in the matter of diagnosis, &c., leads us to refer to them in this connection.

Dr. Meigs justly observes, that "the most essential element of a successful practice exists in a positive diagnosis. It will not do for us to believe this or that—we must guard the interests of the patient by knowing it is this, or that, or the other form and stage of a disease." But we conceive that the following comment upon the difficulties which lie in the way of attaining such precision in diagnosis savor of a prudish sentimentality, rather than of a scientific and conscientious devotion to the physician's highest duty:

> It must be a very trying occasion, that of a sensitive and delicate woman, who is brought into such a strait as to require a physical examination of those parts which naturally shun exposure. The medical man who has even a common share of sensibility will always, therefore, defer this last resort as long as possible, while he makes use of empirical treatment; if haply he might thus be enabled to effect a cure without the waiver, on her part, of those honorable scruples which deserve from him the most perfect respect.

While we would forbid any indiscriminate resort to physical examinations of the uterine organs, and would frown upon any indelicacy, we would not consent to practice this department of the healing art in conformity to the spirit of these suggestions of our worthy author. But our observations have convinced us that the objections and difficulties, here referred to, are mainly imaginary rather than real; indeed, we are persuaded that the physician who is professionally and morally qualified for such duties will seldom meet with much embarrassment, so far as concerns the proper employment of the speculum among intelligent and virtuous females. An intelligent physician will seldom resort to such modes of investigation except in a case of necessity; and the fact that such necessity exists is sufficient apology for the means resorted to.

Dr. Meigs considers that the most reliable form of speculum "is a slightly conical tube of silver, six inches and a half in length. The uterine extremity should be one inch in diameter; * * the outer, or larger extremity, should be one inch and a half in diameter."

Our author's description of the appearance and condition of the inflamed and diseased cervix uteri, though very brief, is quite unique: "One or both of the lips of the womb may be found tumid, softened, granulated, or *botryoidal* in appearance, and of a uniform red; or else *drusy* as to the surface, and presenting some resemblance to the surface and color of a ripe raspberry." A very singular appearance, certainly, is that of an inflamed cervix uteri, which could be termed *botryoidal*, or *drusy*. We cannot imagine a condition of that organ, which, even by a forced analogy, could be said to resemble a bunch of grapes, or the coruscations of crystals.

Young physicians must have better descriptions of the morbid appearances and conditions of the cervix uteri, before they will rise above the necessity of sending off their unfortunate lady patients to Philadelphia for counsel and treatment.

The *illustrations* which Dr. Meigs has given of diseased conditions of the cervix uteri are over-colored, and fail to convey a correct impression of the actual characteristics of the various forms and stages which they are intended to represent. This failure of the plates, however, is not so much the fault of the author, as the mode which was selected for their execution; and printing in colors signally fails, in point of effect, in delineating living morbid structures, for, to use the terms of artists, warmth and softness cannot be produced by the process in sufficient amount to answer the purpose. However, the plates which Dr. Meigs has furnished us are not utterly worthless as they will serve to call the attention of physicians to the obvious importance of surgical treatment, for the relief of the morbid conditions which they very fairly represent.

The tedious detail cases with which we are favored in this report might provoke some impertinent questions, but we are bound to infer that they are all intended as important to the *design* of the report and the treatise; but the terms and the statements, by which these cases are described, will fail to satisfy a scientific uterine pathologist.

So far as topical medication is concerned, our author relies mainly upon the application of the nitrate of silver; but this is by what he learnedly denominates "*antiphlogistic contacts.*" As he accomplishes this by the application of the solid caustic stick, there can be no doubt of the *effects* which are intended and produced. The suggestions which he makes, concerning the rules to be observed in making these applications, are important, though singularly stated.

Concerning retroversion of the uterus, our author makes the following remarkable statement:

> Among these cases of womb complaints, probably none are so common as those which depend upon retroversion of the womb. So frequently does this affection occur in the course of one's medical practice, that one almost acquires a disposition, in every case, before examination, to suspect it has some dependency upon *retroversion uteri.*

The author has long been fully convinced that *retroversion of the womb constitutes seventy-five per cent. of all cases of sexual disorders, that are of a gravity sufficient to require appeal to medical advice.*

Though our author thus broadly declares that retroversion *constitutes* seventy-five per cent. of all cases of uterine disorders, this statement, when justly interpreted, means that, in this large percentage of diseases of the uterus, there is observed to exist a certain amount of displacement of the fundus of the organ backwards. But, when Dr. Meigs comes to teach that the cause of such displacement is to be found mainly in the bad habit to which females are prone, of allowing the blader to become over-distended, and that the engorgement, hypertrophy, and inflammation, accompanying this malposition, are consequent thereupon, we can but believe that he is in error. But, in New-York, we do not find that retroversion exists in seventy-five per cent., nor indeed in one half that proportion of uterine diseases; and, in all ordinary cases of malposition, the mechanical abnormity is satisfactorily relieved so soon as the uterine engorgement and inflammation are cured, and the patient's vigor restored. Of course we do not resort to the employment of the pessaries and uterine supporters which Dr. Meigs and his mechanical brethren have very ingeniously devised; and we have yet to learn that such contrivances are of any avail in the cure of uterine diseases. But it is not strange that Dr. Meigs resorts to pessaries, &c., for he asserts that "prolapsus uteri is a disorder or weakness of the vagina and its ligaments."

Concerning ulceration of the cervix uteri, Dr. Meigs offers the following remark: "An immense experience in a populous metropolis—an experience greatly increased by the resort of numerous invalids from the country, and from the different United States—enables me with confidence to declare, that an ulceration of the womb is among the rarest of disorders."

Of the diseased conditions of the canal of the cervix uteri our author says but little; and of the elemental and most important facts in the pathological history of any of the diseases of the cervix upon which he reports, he fails to give us any rational or important information. Indeed, the treatise, as a whole, is not only exceedingly meagre and unsatisfactory, but we feel that it does great injustice to its distinguished author, who has earned a reputation worthy of a far better production than this.

Dr. Bennet's treatise is widely different from that of Prof. Meigs, both in its design and execution. He has attempted to present a rational and strictly scientific pathological history of the inflammatory diseases of the uterus, and in doing this he has not allowed ambiguous terms or equivocal statements to obscure the truth. Ever since the publication of the first edition of Dr. Bennet's treatise, in 1845, it has been the subject of the most searching criticism, while it has instigated the most careful and extensive pathological investigations of uterine diseases. The present revised and enlarged edition must be acknowledged the best treatise of the kind in the English language, and we know of none in the French or the German that are equally valuable. It certainly is no small compliment to Dr. Bennet, that his treatise is published in the latter countries, and that a fourth edition has been called for and issued in our own country.

It must be admitted that Dr. Bennet's writings have served to mark a new era in the literature, if not in the pathological doctrines, of this department of medicine. The earnest and even angry opposition, by which the early editions of his treatise were assailed, indicates the important and wide difference of opinion and practice existing between Dr. Bennet and his worthy seniors; while the readiness and the remarkable uniformity with which our author's views are adopted or accepted by nearly all those physicians who were most familiar with uterine pathology and the diseases of females, demonstrate, no less certainly, the conformity of Dr. Bennet's teachings to the facts everywhere observed in practice.

We conceive that his work contains some statements and suggestions which will eventually be modified, and that it inculcates some erroneous, or at least too exclusive, pathological doctrines, against which those not already familiar with uterine disorders may need to be guarded; yet, in point of general accuracy and practical value, there certainly is no other treatise that equals this. No physician's library can be complete without it.

The very full analysis of the former edition of the work, given in this Journal, N. S., vol. v., precludes the necessity of an extended or critical notice of the present edition; we will, therefore, only refer to a few of the more important points which are newly stated or prominently re-affirmed in this edition.

In reference to the whole subject of inflammation and ulceration of the neck of the uterus, the opinions and doctrines put forth by Dr. Bennet, in the former editions of his work, are fully re-affirmed in this, and he re-states his definitions and views of what he terms ulceration of the cervix, in such language that no one need doubt his meaning, or cavil at his use of the term. He considers that any degree of solution of continuity occurring in the epithelial structure, or in any superficial tissue, occurring in connection with, or as the result of, an inflammatory process, constitutes an ulcer. That a solution of continuity in at least the epithelial structure is a very frequent, and, indeed, an almost necessary result of continued inflammatory action, does not admit of dispute. This being the common event in inflammation of the cervix, then, Dr. Bennet and all who admit the correctness of his definitions necessarily find ulcerations in the great majority of cases of inflammation of the cervix uteri. Again, Dr. Bennet and others consider that the presence or production of pus is an absolute proof of the existence of ulceration in the mucous, no less than in any other tissue. And further, he conceives that the opaque film that is formed by the contact of nitrate of silver to the diseased cervix accurately marks the extent as well as the existence of the ulceration.

Now if any one is disposed to call in question the correctness of Dr. Bennet's teachings on this subject, he would do well to consider that *the* pathological events upon which these questions depend are not yet satisfactorily settled, at least so far as the phraseology by which they are expressed is concerned. It is well known that in inflammation of a mucous membrane, there often occurs a mixture of imperfectly elaborated fibrine with the mucus, which degenerates rapidly into pus corpuscles, and Mr. Paget asserts that, in the more acute inflammations, the characters of the pus-cells seem to be acquired in the very beginning of organization of the exuded liquid. Mr. Paget also states the following important facts, which are relevant to this subject: "The superficial suppuration from inflamed mucous membranes is closely related to that from an ulcerated surface. I think, indeed, that an inflamed mucous membrane may yield purulent matter, even though it remain covered with an epithelium. I believe this happens in gonorrhœa and in purulent ophthalmia; the vascular tissues, in these affections, appear still to have an epithelium on them, though perhaps it is too thin and immature, and is reduced to a condition analogous to that of the thin and moist glistening epidermis on the inflamed 'weeping leg.' But observations are wanting on this point. The transition to the suppuration from an ulcerated surface takes place when the epithelium is wholly removed from a mucous membrane. This constitutes its abrasion or excoriation; in the next stage the surface of the membrane itself is cast off, and this is its ulceration or erosion." (*Paget's Surgical Pathology.*) Again, this clear-minded and candid pathologist remarks concerning ulcerative inflammation: "Of all that Hunter wrote, nothing, I think, is so intricate, so difficult to understand, as his chapter on ulcerative inflammation; and much of the obscurity in which he left the subject remains. Some of this depends on the same terms having been used in different senses, and may be avoided if it is agreed to speak of the removal of those particles of inflamed parts which are not an open or exposed surface, as the 'interstitial absorption' of inflamed parts. Then the term 'ulceration' may be employed to express the removal of the superficial or exposed particles of inflamed parts; or rather, when the epithelium or epidermis of an inflamed part is alone removed, it may be called 'abrasion' or 'excoriation;' and when any of the vascular or proper tissue is removed from the surface, it may be called 'ulceration.'"—(*Op. citat.*)

Judged in the light of these technical and pathological distinctions, it is plain that Dr. Bennet employs the term "ulceration" in a sense altogether too wide and indiscriminate; but we think that no one need be misled who reads his treatise. He is certainly not as wide from the truth as is Professor Meigs, who asserts that "ulceration of the womb is among the rarest of disorders." The manner and form in which ulceration of the cervix uteri occur is most graphically illustrated in the elaborate paper by Dr. Tyler Smith and Mr. Hassell, on the Pathology of Leucorrhœa .(*Med. Chir. Transact.*, vol. xxxv.)

We have thus called attention to the "vexed question" which has so long been acrimoniously but idly discussed, believing that the pathological facts, and the unsettled points therewith connected, to which we have referred, serve to place the whole subject in a true light, and to explain the discrepancies which exist in the statements of different uterine pathologists.

Dr. Bennet's chapters on the treatment of inflammatory affections of the uterus constitute the most meritorious and practically important part of his treatise; yet we have become satisfied that he presents the importance of topical or surgical treatment in too strong a light, and that he too freely commends the use of the stronger caustics. However, our own experience has taught us that something more than the "antiphlogistic contacts" of nitrate of silver is not unfrequently necessary in the treatment of ulceration and inflammatory conditions of the cervix uteri.

In his chapter on Ovaritis, &c., Dr. Bennet attempts, but we think unsuccessfully, to overturn the conclusions of Mr. Tilt upon that subject; yet the facts and reasonings adduced by our author are highly important, and practically suggestive.

On the subject of displacements of the uterus, Dr. Bennet has, in a few pages, given suggestions which are of greater practical value to the profession than all else that has ever been written, if we except, perhaps, the excellent dissertation of Dr. Peebles of Virginia.

The chapter on Syphilitic Ulcerations of the Neck of the Uterus is very valuable, but we must demur at some of the author's conclusions concerning the nature of the *non-cancerous-looking* ulcerations which complicate the various forms of secondary syphilis. He very summarily sets aside the conclusions of M. Gibert, in reference to the specific character of a large proportion of the ulcerations which occur about the cervix uteri in persons suffering from secondary forms of syphilis. If our observations and study upon this subject have not misled us, we are bound to conclude that the conclusions of M. Gibert are more nearly correct than those of Dr. Bennet.

The closing chapter of Dr. Bennet's treatise is devoted to the subject of diagnosis of cancer of the uterus, and for it the profession, as well as the unfortunate sufferers from inflammatory affections of the uterus, may be grateful; for it is perfectly manifest that the popular notions on this subject are not only entirely erroneous, but adapted to embarrass the practitioner, and also cause great damage to the suffering patient.

Notwithstanding that Sir Charles Clark, Dr. Montgomery, and Dr. Ashwell, have taught that the forms of induration, which they term cancer of the uterus, are generally curable in their incipient stage,—which is the only stage at which any of them are seen,—except in the cases of really malignant disease, which, so far as the histological evidences indicate, are certainly observed very rarely, we think that all who hold such doctrines concerning cancer of the uterus will find their minds very frequently and unnecessarily embarrassed in reference to these cases in practice; for it is conceded that it is not only hazardous, but utterly unjustifiable, to venture upon any surgical treatment of carcinoma uteri, short of amputation of the diseased portion. Hence, many a poor sufferer has been doomed by her medical advisers to endure a most vexatious malady, but, at the same time, one of the most curable of structural disorders of the womb.

Our prescribed limits forbid that we should enter more fully upon the discussion of this important subject, and we will here close this notice of the interesting treatises before us, with the expression of the hope that whoever reads the report and treatise by Dr. Meigs, will also attentively study the incomparably excellent work of Dr. Bennet, and the forthcoming treatise by M. Jobert de Lamballe, which is shortly to be issued from the press of the Messrs. Wood of this city.

E. H.

BIBLIOGRAPHICAL NOTICES.

Art. XIII.—*On Rheumatism, Rheumatic Gout, and Sciatica, their Pathology, Symptoms, and Treatment.* By Henry William Fuller, M. D., Cantab., Fellow of the Royal College of Physicians, London, &c., &c. New-York: Samuel S. & William Wood, 261 Pearl-street. 1854. 8vo., pp. 322.

This is a reprint of Mr. Fuller's Treatise on Rheumatism, an elaborate review of which appeared in this Journal for November, 1853, soon after its publication in London. We would refer the reader, who may wish to estimate correctly the merits of the work, to that analysis. The publishers have done full justice to the mechanical execution of the work.

Art. XIV.—*Elements of Human Anatomy; General, Descriptive, and Practical.* By T. G. Richardson, M. D., Demonstrator of Anatomy in the Medical Department of the University of Louisville, &c., &c. Philadelphia: Lippincott, Grambo & Co. 1854. 8vo., pp. 734.

This work is put forth as possessing claims for improvement, upon previous treatises on anatomy. 1st. In the union of general, descriptive, and practical anatomy in the volume. 2dly. In the arrangement of the section devoted to practical anatomy, so as to secure the greatest possible economy of *material;* and lastly, in the substitution of English for Latin terms, wherever this appeared to be practical and judicious.

There is good reason to believe, that the experience of teachers and students will sanction the production of a work on enatomy upon these grounds, and from the limited examination we have given the volume, we believe it well adapted to the wants of student and teacher.

Art. XV.—*Lectures on the Diseases of Infancy and Childhood.* By Charles West, M. D., Fellow of the Royal College of Physicians; Physician to the Hospital for Sick Children, &c., &c. Philadelphia: Blanchard & Lea. 1854. 8vo., pp. 487.

This is the second American from the second London edition of Dr. West's truly practical work on the diseases of children. The additions to the text of the English edition amount to some fifty pages, thus supplying not a few of the deficiencies of the first edition.

Art. XVI.—*History of the Epidemic Yellow Fever at New-Orleans, La.*, in 1853. By E. D. Fenner, M.D., President of the Louisiana State Medical Society; one of the Visiting Physicians of the New-Orleans Charity Hospital, &c., &c. New-York: Hall, Clayton & Co., Printers. 1854. 8vo., pp. 84.

Tableau of the Yellow Fever of 1853, *with Topographical Chronological, and Historical Sketches of the Epidemics of New-Orleans since their Origin in* 1796, *illustrative of the Quarantine Question.* By BENNET DOWLEN, M.D., Corresponding Member of the Academy of Natural Science of Philadelphia, &c., &c.

THESE two productions, widely different in their general characters' are worthy of the pens of their authors. They contain an amount of general statistical and historical information nowhere else to be found, and must in future time be sought after as essential documents in a correct medical history of our country. We regret that want of space prevents us from noticing in detail the interesting contents of these publications.

ART. XVII.—*A Report to the Indiana State Medical Society on Asiatic Cholera, as it prevailed within the State of Indiana during the Years* 1849, 1850, 1851 *and* 1852. *With Observations on the Laws which govern its Progress.* By GEORGE SUTTON, M.D. Indianopolis: Elder & Harkness, Printers. 1854. 8vo., pp. 67.

THIS is a valuable report, and presents the best summary of the progress of Cholera in the State of Indiana that we have seen. The materials from which it was prepared were derived mainly from facts communicated to Dr. S. by the principal physicians of the State.

ART. XVIII.—*A Report on the Health and Mortality of the City of Memphis, for the Year* 1843. By CHARLES T. QUINTARD, A.M., M.D., Professor of Physiology and Pathological Anatomy, in the Memphis Medical College. (Published by order of the City Council.) Memphis, 1854. 8vo. pp. 32.

THE perusal of this report has afforded us much pleasure. In a future number of this Journal, we hope to lay some of the facts which it contains, before our readers.

ART. XIX.—*Constitution and By-laws of the Medical Association of Texas. Instituted Jan. 17th*, 1853. *Incorporated by the fifth Legislature*, 1853–54. *Proceedings of the last Annual Meeting, together with the Anniversary Address, delivered by* GEORGE CUPPLES, M.D., November, 1853. Austin Jo. Walker, Printer. 1854. 8vo. pp. 30.

WE are pleased to see that a state medical organization has been effected in Texas. It will tend to promote unity of feeling and concert of action, which must conduce to the general welfare and improvement of the profession. The officers for the present year, are Dr. Geo. Cupples, of San Antonio, *Pres.;* Drs. S. K. Jennings, Jr., and Jno. T. Alexander, *Vice-Pres.;* Dr. R. N. Lane, of Austin, Rec. Sec.; Dr. A. J. Lott, Corres. Sec.

PART THIRD.

FOREIGN MEDICAL RETROSPECT.

PRACTICAL MEDICINE.

Fermentation in the Contents of the Stomach, with Development of Sarcinæ. By George Budd, M.D.—It appears that the peculiarity of the disorder we are considering consists in this, that the secretions of the stomach, which seem to be usually more abundant than natural, undergo or excite in the food in the stomach, and after they have been thrown up from it, a fermentation which is attended with the evolution of carbonic acid, and with the production of torulæ and sarcinæ, and which leads to the formation of acetic acid. The production of the disorder seems to require that there shall be some condition which prevents the stomach from completely or readily emptying itself. The disorder may occur in young persons, and exist for a short time, as in one of the cases related by Mr. Busk, and in a case that has been recorded by Dr. Bence Jones, in which it was noticed a short time before death in a boy of 14, who died of peritonitis and granular disease of the kidney; but it has been most frequently noticed in men who have reached middle age,—persons more liable than any others to simple stricture and cancer of the pylorus, and to other diseases which prevent the stomach from completely emptying itself,—and in such persons the malady is usually of long duration, and may, indeed, continue to the end of life. The appetite is generally good, but the indulgence of it is followed by flatulent disension of the stomach attended by a sense of burning or other uneasiness, which, when an ulcer of the stomach exists, sometimes amounts to almost agonizing pain. When the disorder is slight, the heart-burn or uneasiness at the stomach continues for some hours, and then gradually subsides, as—in one way and another, by the absorption and discharge of its contents,—the stomach gets empty. When the disorder is in higher degree, the uneasiness persists until it is relieved by the vomiting or eructation of a clear, sour, fermenting liquid. The quantity of this liquid ejected at once varies in different cases and at different times; and when an obstruction at the pyloric orifice has long existed, and the stomach has become much enlarged, sometimes amounts to two quarts or more. When much is thrown up from the stomach, the bowels as in ordinary cases of stricture of the pylorus, are usually costive. There is, in most cases, complete absence of fever, but sleep is often much disturbed by the distension and uneasiness of the stomach, which, as they result from eating, are more distressing in the evening and at night than in earlier parts of the day. The disorder of digestion, the pain, the disturbance of sleep, cause loss of flesh, and after the malady has lasted long in high degree, the patient is usually emaciated, has a dry skin, a slow pulse, and the look of a person with serious organic disease of the stomach. The disorder is readily recognised when it is in such degree as to cause vomiting, by the circumstance, that the matter thrown up from the stomach ferments, and that both the foam which collects on its surface, and the sediment it throws down, contain abundance of sarcinæ and torulæ. It would seem, from the evolution of carbonic acid, from the development of torulæ, and from the fact, that alcohol was detected by Professor Graham in the matter vomited in a case of this kind, that common alcoholic fermentation is the first step in the process of transformation; but the alcohol appears to be rapidly transformed, and the process ends in the production of a large quantity of acetic acid. No symptoms of intoxication have been noticed in cases of this kind.

As the production of acetic acid from alcohol requires a large quantity of oxygen, there can be little doubt, that where, as in the analysis published by Mr. Goodsir, a very large quantity of acetic acid has been found in the matter vomited, much of this acetic acid has been formed after the matter has been ejected from the stomach. We know that fermentation goes on actively in the matter ejected, and the conditions for the acetification of alcohol would seem to be much more favorable when the matter is exposed to the air than when it is shut up, excluded from the direct influence of the air, in the body. It must not be supposed, however, that this peculiar fermentation constitutes the whole disease. The disease consists primarily and essentially of some organic change which prevents the stomach from completely or readily emptying itself, and which causes a secretion from the coats of the stomach which when mixed with the food, is prone to undergo or to excite the fermentative process in question. The fermentation may be stopped for a time; the matter thrown up from the stomach may be alkaline, and contain no sarcinæ, as happened to Barraston during his stay in the hospital; but the patient, instead of being then well, has the more common kind of disorder which an impediment to the emptying of the stomach causes. The question then arises,—How is it that an impediment to the emptying of the stomach leads to this kind of fermentation in some cases and not in others? Is there any peculiarity in the organic change in the particular cases in which the fermentation occurs? It is curious that, in two of the cases related by Mr. Busk, the disorder resulted from hernia of the stomach through the diaphragm, the coats of the stomach itself being sound. The development of the sarcinæ has probably the same relation to the fermentative process, or to some stage of the fermentative process, as the development of torulæ has to simple alcoholic fermentation. It is worthy of note that sarcinæ are not peculiar to the stomach. They have been found in other animal secretions in a state of decomposition. In a review of Lehmann's "Physiological Chemistry," in the *British and Foreign*

Medico-Chirurgical Review for 1851, it is stated, that sarcinæ have been once detected in the urine by Heller; and Dr. Beale tells me that he has discovered them once in urine and once in decomposing bile. But, although the development of torulæ and sarcinæ cannot be considered the primary cause of the stomach disorder, the fermentation that attends it, by leading to the evolution of gas, and the formation of acetic acid, and thus distending and fretting the stomach, terribly aggravates the sufferings which the impediment to the emptying of the stomach, which is the origin of the mischief, would otherwise produce. The heart-burn and uneasiness of the stomach may be lessened, by neutralising the excess of acid by carbonate of soda or some other alkali; but the readiest, perhaps, in most cases, the chief means we have of relieving the disorder, are the agents which tend to prevent the fermentative process. The fermentative process may be checked by creosote, which has a remarkable influence in checking fermentation of various kinds, and which was given with benefit in three of the cases noticed above, and in several others, of which accounts have been published in the Medical Journals. Small doses—a minim or half a minim —in the form of a pill, might prove sufficient if taken, as it should be, at every meal.* If we may judge by the case of Burraston, the fermentation may also be checked, and the disorder, in some cases, be much mitigated by large quantities of common salt. A more effectual remedy still is, perhaps, the bisulphate of soda, which is a powerful antiseptic, and has been, of late years, much used in some anatomical schools, to preserve bodies for dissection. It has also been used to prevent the fermentation of vegetable juices. It owes its virtues to the circumstance, that it is decomposed by almost any vegetable acid, and that its decomposition liberates sulphurous acid, which has great power to prevent alcoholic and acetous fermentation.† The merit of suggesting it as a remedy for the disorder we are considering, belongs I believe, to Dr. Jenner who gave it with much success in the case to which I have before referred. I have myself tried it with much benefit in several cases in which the symptoms were like those that attend the vomiting of sarcinæ. From ʒss. to ʒj. of it may be given, dissolved in water, two or three times a day; and probably, with proper care as to the times of giving it, smaller doses would prove sufficient. There are, perhaps, many other agents having power to prevent fermentation, that might prove beneficial in the same way. In chronic cases of the disorder, the drain from the coats of the stomach, and the frequent throwing up of part of its contents, causes constipation; and it is requisite to obviate this condition, since any undue accumulation in the bowels aggravates the stomach-disorder. The best aperients are probably aloetic or colocynth pills. When the disorder is severe, and the patient reduced in flesh, opiates, timely administered, are of much service in lessening the uneasiness at the stomach, and promoting sleep. It now and then happens, that the disorder co-exists with chronic ulcer of the stomach, and that eating solid food causes *pain* in the stomach, which is different from the uneasiness that results from distension of the stomach, and pain also in the corresponding part of the back. In such cases, as in ordinary cases of simple ulcer, the diet should be of the least irritating kind. By the various means which I have now enumerated, the disorder may be greatly mitigated, the strength of the patient kept up, and his life prolonged; which is as much as can be promised for any disorder which originates, as this usually does, in irremovable organic changes.—*Med. Times and Gaz.*

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* In the new mode of preparing vinegar from alcohol, by making the alcoholic liquid frequently strain through twigs or shavings, it is found that any charring of the twigs or shavings entirely prevents the acetification of the liquid.

† In some parts of Devonshire, sulphurous acid generated by the burning of sulphur, is used to arrest fermentation, and prevent acetification in cider.

Spinal Irritation. By ROBERT LEAW, M.D.—That there is such a disease as spinal irritation I firmly believe. I further believe that there are two forms and modifications of this disease, as different in their nature as they are in the treatment they require. That one is of a constitutional origin, and is often induced by moral causes operating on the spinal marrow, which we may regard as the emotional department of the nervous system, and propagating their disturbing influence to the different organs situated along the spine. That different circumstances and causes influence the secondary organic affections, such as natural or acquired weakness, or morbid susceptibility in any of these organs. Period of life, too, according to which one organ may have its function more exercised than at another period, will serve to give a direction to this reflected morbific influence. The peculiar desultory or intercurrent character of this modification of disease is its characteristic feature, and with this I would connect its comparatively harmless character. It does not dwell sufficiently long in any portion of the spine to allow time for actual disease to establish itself in the contiguous organs. It changes its place too rapidly for this, and this shifting, versatile character has created the difficulty of bringing it within the limits of any general description. This is the reason, too, why its true pathology is so little understood, as it so rarely supplies material for post-mortem examination.

As this is essentially a constitutional disease, to which the local organic affections are mere accidents, so the treatment should be constitutional, with a due regard, however, to the local affections. Its changeableness and inconstancy preclude me from entering into the details of treatment, I can only deal in generalities. While the appropriate treatment is essentially tonic, we may employ local depletory measures with great benefit. I have remarked, in my observations on the fever that prevailed in Ireland in 1847–8, how frequently the symptoms of spinal irritation and most distressing pains in the course of the spinal nerves exhibited themselves, and how constantly these symptoms disappeared from the application of leeches to the spine, at the same time that the constitutional treatment consisted in the almost exclusive use of stimulants. I believe that these pains are, if I may so express it, an exaggeration of the feeling of *malaise*, so constant as an early symptom of fever, which I conceive to be a modification of the peripheral sensibility, dependent upon the state of the capillaries, which are probably in a too congested condition, and that the relief from leeches is due to the removal of this congestion. And although it may appear inconsistent and paradoxical to deplete and stimulate at the same time, yet these opposite means are really promoting the same end. The overstrained and overloaded vessels are relieved by the leeches, and acquire from the invigorated system additional power to act upon their diminished burden. I have found hot stimulating liniments rubbed along the spine signally useful in relieving this feeling of discomfort, which I attribute to their stimulating influence on the capillaries.

The other modification of the disease is when it is of local origin, and where the spinal affection is secondary to and dependent upon some organic lesion situated in the spine itself, or in some organ from whence it is reflected upon the spine, and thus simulates a case of original spinal irritation. I saw a remarkable case of this kind, in which an insidious process of caries of the vertebræ eluded the observation of one of the most careful surgeons I ever knew, and was not detected until palpable deformity had occurred. In this case the patient at one time labored under the most distressing sickness of stomach I ever witnessed, and nothing seemed to exercise the slightest control over it. When it ceased, the patient suffered from violent palpitation of the heart and occasional hemoptysis. These, however, proved themselves more amenable to the influence of medicine. The patient ultimately attained to perfect health; the organs also resumed their normal regular action when nature had completed her cure of the caries.—*Dublin Quarterly Journal.*

Sciatica.—Mr. Hancock read a paper on the causes and treatment of Sciatica before the Medical Society of London, Feb. 28, (*Med. Times and Gaz.*,) of which the following is an abstract: He alluded to the various causes assigned as producing sciatica—viz., disorder of the stomach and bowels, inflammation and disease of the sciatic nerves, syphilis, gout, obstruction and distension of the caput coli, tumors, or accumulated fæces in the course of the nerve, effusion of fluid into the sheath of the nerve, irritation and disordered state of the kidneys, and rheumatism, either acute or subacute; but that from the cases which had fallen under his observation, the prevailing opinion appeared to be that sciatica depends mostly upon rheumatism—an opinion which he considered erroneous, as having had ample opportunities of arriving at a conclusion, he felt convinced that the cause most productive of the complaint was irritation within the pelvis, either from loaded colon or cæcum, or from tumors formed within that cavity, or, as had been suggested to him by his friend and colleague, Mr. Goldsboro, by the hæmorrhoidal vein, which, forming a complicated plexus over the sacral plexus of nerves, would, when congested and engorged, cause undue pressure and irritation of the nerve; that although he would not presume to assert, in opposition to the high authorities who differed from him, that the disease never depended upon rheumatism, still he maintained that it so seldom did so, as to constitute the exception to the general rule, and not the rule itself. Mr. Hancock then enumerated some of the modes of treatment, recommended such as bleeding, cupping, calomel and opium, colchicum, quinine, carbonate of iron, Indian hemp, acupuncture, actual cautery, blisters, moxas, puncturing the limb, and introducing morphia and creasote into punctures. He did not consider the disease difficult of cure; on the contrary, he had found it readily and speedily yield to the remedies he had adopted, which consisted in thoroughly purging the patient with small doses of croton-oil, combined with blue pill, henbane, and compound extract of colocynth, and removing the sensation of bruising in the course of the nerve by the sulphate of quinine, in doses of three grains thrice daily. He had commonly given croton-oil, because he had found it useful and convenient, but he did not attach any specific influence to this medicine, as he had found equally good results from turpentine and castor-oil, the aloetic purgatives; and he considered that any medicine acting upon the lower intestines would be of service. He did not consider local applications at all necessary, but that they were frequently injurious, by adding to the patient's sufferings. He narrated five cases which had fallen under his care, having been previously treated for rheumatism by the remedies appropriate for the affection, but without success. In one the sciatica had existed for nearly two years; in another, for above twelve months; and in the remainder, from four to two months. The most obstinate of these was cured in three weeks, and the remainder in a fortnight, the latter period being that usually required. He could give many more cases of a similar character, but he thought those he had described were sufficient to prove the validity of his position, that in a vast majority of instances the disease did not depend upon rheumatism, but upon the causes which he had already alluded to; and he directed the attention of the Society to an interesting fact, which he had not found noticed elsewhere—namely, that sciatica almost always occurred on the right, and very seldom indeed on the left, side of the body; and when it did, he believed it was caused by impaction in the sigmoid flexure of the colon. In the majority of cases the affection commenced with stiffness, weight, and pain in the lumbar region, resembling lumbago. He was inclined to attach some importance to this fact, as affording a means of diagnosis between those cases depending upon loaded intestine and those resulting from tumor in the pelvis; and that where this symptom is absent, it is desirable to institute a careful examination, not only above Poupart's ligament, but in the perineum within the tuber ischii, and also by the introduction of the finger within the rectum. He had in two instances detected the existence of tumor in the pelvis by adopting these measures; and he thought this the more desirable from the importance of avoiding irritation as much as possible in cases of this description.

Galium Aparine in certain forms of Cutaneous, Scrofulous, and Cancerous Diseases.—When Dr. Winn first drew the attention of his professional friends to the properties of this plant, two years since, he was only aware of its efficacy in treating lepra; since then he has ascertained its benefit in other skin diseases. Dr. Winn then related the circumstances which led to his acquaintance with the galium aparine. A friend of his in Truro, who had suffered for many years from lepra vulgaris, and had taken all the usual remedies in vain, informed him, that he possessed at last a remedy for his troublesome complaint in a common wild plant, of which he did not know the name. Dr. Winn found this plant to be galium aparine, which grows abundantly in England; and, on further inquiries, learned, that three other persons in that district had been cured by the same remedy, one of whom had been discharged from St. George's Hospital as an incurable patient. After a botanical sketch of the plant, Dr. Winn expressed his belief, that the ancients were acquainted with this plant, and that it is identical with the ἀπαρίνη of Dioscorides. On referring to some very old authorities, he ascertained, that the galium was much in vogue as a domestic remedy in this country many centuries since; it was then highly extolled as a cure for cancer, scrofula, leprosy, and dropsy. An Italian writer, Giuseppe Ferramosia, had published in *Schmidt's Jahrbücher*, an account of several cases of scrofula, in which the galium appeared to produce rapid absorption of enlarged scrofulous glands. Diebach had also recommended it for phthisis, ascites, and scrofula. Richter considered it beneficial in strumous affections. Dr. Winn wished to direct attention to the fact of galium having been efficacious in glandular affections as well as lepra; it tended to confirm the theory, that the two diseases were owing to the same cause, a strumous diathesis. It was also a remarkable circumstance, and one not generally well known, that arsenic is highly beneficial in glandular swellings. Mr. H. Rees, an experienced and successful practitioner in the diseases of children, informed Dr. Winn that he had tried arsenic in infantile glandular affections, and proved it to be a most efficacious remedy. When first Dr. Winn tried the galium it was in the form of a decoction; but finding this mode inconvenient, he requested Mr. Hooper, of Pall Mall, to prepare an inspissated juice, and that able operative chemist had succeeded in making a very valuable preparation. A teaspoonful of the juice equals in strength a half pint of the decoction. In ordinary cases a drachm taken three times daily will be found sufficient, but in obstinate affections the dose must be doubled. The juice of the galium had been analysed by Ferremosia and Robert Schwartz. The former gives as its constituents acetate of potass, gallic acid, tannin, extractive, water. The analysis of Schwartz is somewhat different. He gives its component parts thus: Galitannic acid, citric acid, rubichloric acid, chlorophylle, starch. With regard to the *modus operandi* of the galium, Dr. Winn said he had little to offer but what was merely conjectural. Many of his patients were conscious of an increased flow of urine during its use, possibly from its acting on the kidneys as a depurating agent. The class of cutaneous diseases which had been benefited under his own observation, was chiefly that dependent on a state of dyscrasia, such as lepra and psoriasis. He also considered these diseases as often arising from a strumous diathesis. The gentleman suffering from lepra, whose case had been referred to at the commencement of the paper, was one of a very consumptive family. In him the family disease had manifested itself under another form. It is highly important that the fluid extract be perseveringly used. Many patients have failed, no doubt, from not having given the remedy a sufficient trial; the same may be said of arsenic. Dr. Winn had tried the galium in 19 cases of skin diseases. Of these, five were cases of lepra; six of psoriasis; four of eczema; two of lichen; one of inflamed acne; and one of ordinary copper-coloured syphilitic eruption. In nine of these cases the benefit derived from this medicine was very striking. In one, an instance of lichen circumscriptus, the effect produced by substituting the galium for other remedies was almost marvellous. With regard to the efficacy of this plant in the treatment of cancer, Dr. Winn was solely indebted to the experience of Mr. Bulley, of the Bucks Hospital, who had forwarded to him an account of two cases of cancer in which the galium appeared to exercise a remarkable influence in arresting the disease.

Pemphigus.—The following are the conclusions appended to a report of eighteen cases of Pemphigus, (*Med. Times and Gaz.*):

1. That pemphigus is a disease affecting all periods of life; especially liable to occur between the ages of 4 and 25.

2. That, like many other skin diseases, it very frequently recurs in those who have once been its subjects.

3. That it usually affects those only of a fair complexion and thin skin. (To this we find no exception among the cases in which note has been made as to the complexion.)

4. That it is rather more common in the male than the female sex.

5. That its severe chronic and relapsing forms are more frequent than the benign and transient.

6. That the parts most liable to be affected are the legs, arms, genitals, abdomen; seldom the face, and very rarely the hairy scalp.

7. That the serum of the bullæ is almost always alkaline. (It was tested in most of the cases, and no exception occurred; the alkalinity was generally very great.)

8. That it is very rarely a symptom of congenital, and perhaps never of acquired syphilis.

9. That it occurs commonly to those of good physical conformation, but is mostly coincident with temporary cachexia.

10. That it is not very markedly influenced by season.

11. That its idiopathic infantile form is a very mild disease, and will usually recover spontaneously.

12. That it is not, as a rule, associated with any particular form of cachexia. (In but two of the above cases were the patients scrofulous; none were known to be rheumatic, or to have had ague; dyspepsia was an attendant in but few.)

13. That the general indications are for the use of tonic regimen and generous diet, but that these will not suffice for the cure.

14. That arsenic may be esteemed an almost specific remedy even in the worst class of cases. [The careful perusal of the preceding series, will, we think, convince the reader that this proposition is not too strongly put. Many of the patients were, when admitted under Mr. Startin's care, in a truly deplorable condition,—the disease had

produced extreme irritation, it had lasted for many months or years, it had resisted all sorts of treatment previously. In every instance but two the most marked benefit attended the adoption of the arsenical plan.]

15. That arsenic does not merely repress the eruption, but remedies the unknown constitutional cause on which that symptom depends, always very much benefiting the general health of the patient.

16. That arsenic does not prevent the liability to subsequent attacks, but that such attacks are always much less severe than the original one, and tend, if treated by the same remedy, to diminish in intensity on each successive occasion.

17. That the early age of the patient does not in the least forbid resort to the arsenical treatment.

Those acquainted with the literature of this subject will observe, that the above conclusions differ considerably in some respects from the statements to be found in books. The disease itself may probably differ somewhat in London and on the Continent. Gilibert, whose monograph on it is the best extant, appears, for instance, to have met with but three examples of chronic pemphigus, all of them in elderly and enfeebled subjects. A current opinion has accordingly prevailed, that that form is almost peculiar to the aged, while the fact is, as we have above shown, that in London, at any rate, the young are much more frequently its subjects. Cases of relapsing pemphigus, or those in which the disease has extended over many years, do not appear to have attracted much notice from previous writers. Pemphigus is not known to prevail endemically in any part of England; on the contrary, it seems to be about equally scattered over all districts. Two cases came under our notice in York some years ago, and during the last summer we saw a very well-marked case in the Leeds Infirmary, under the care of Mr. Samuel Hey. Mr. Hey informed us, that the disease was very rare in Leeds, and that he had, during many years, seen but that one example. There does not appear to be much foundation for the opinion that the disease prevails most in damp localities, and on the banks of rivers Such a notion is supported by but a small proportion of the above cases. The preceding series probably scarcely presents the benign and chronic forms in their due proportions as to frequency of occurrence, since cases of the former are often of so transient a character that they never come under care at Hospitals. With regard to the treatment of the chronic form by arsenic, we have recorded *all* that we have seen. A case has been mentioned to us, however, by a gentleman of very careful observation, is which the arsenic is stated to have quite failed to cure the disease, while it seriously interfered with the patient's (a child) health. We have not obtained particulars as to administration, etc.

SURGERY.

On a Peculiar Disease of the Rectum.—We find among the "Selections from the unpublished Manuscripts of the late ABRAHAM COLLES" (*Dub. Quart. Jour.*) the following fragment of an essay on a peculiar disease of the rectum:— But, although the following remarks cannot furnish us with an insight into its nature and cure, yet I trust it may be a task not unworthy of your notice to lay before you the symptoms of this disease, which, I fancy, has been long known to practitioners, but the symptoms and natural history of which I cannot find recorded in any surgical works. I have seen it attack patients of both sexes indiscriminately, and persons of all ranks of life indifferently. I have met with no instance where it occurred before puberty or after 60; it may attack at any age between these two periods. Many of these unhappy people commence the history of their disease,—that their bowels had been obstinately costive for some days, or even for weeks; that they had taken very large and repeated doses of salts and other purgative medicines without having been able to procure a single evacuation; that this long-continued constipation of the bowels at length gave way, and on passing a stool a large discharge of pure blood, or blood mixed with purulent matter, to the amount of some quarts, followed the evacuation. With other patients, a tenesmus for a few days preceded this costiveness; the tenesmus having continued some days, many of them then perceived a lump or fulness at the verge of the anus, which they did not notice previously, and which they conceived to have been caused by the affection. Some few of these patients cannot refer the commencement of the disease to any particular period; they have never been sensible of any lump or tumor. Such persons generally mention that they had often been subject to inward piles in the rectum.

However different the commencement of the disease may be in different patients, yet they are all similarly affected in its subsequent stages, for after this first large evacuation of blood, or other fluid, the patient is troubled with a frequent desire to go to stool, on which occasions, in general, nothing but a very small quantity of fluid escapes, sometimes a table-spoonful of a glutinous matter, sometimes more thin and liver-coloured. Seldom is a feculent stool passed, and when it is, the patient is sensible of a contraction in the gut, or diminution in its caliber; if the fæces be hardened, the evacuation is attended with excessive pain; if of a more soft, though solid consistence, the diameter is much lessened, sometimes not exceeding that of a writing pen. They generally pass two, three, or more days without a feculent stool unless they use some article of diet or medicine for the purpose of evacuation. From the description of these patients, it appears that the tenesmus which accompanies the alvine discharges is the prime source of this distress. The stools vary in number on different days, sometimes amounting to twenty, seldom fewer than six or eight. After the disease has continued in this state for some indeterminate period—a few months or years—the condition of the patient is rendered more distressing by a discharge of a thin, ichorous or coffee-colored fluid, which flows from the rectum when he coughs, or walks, or uses any bodily exertion; not unfrequently his nights are rendered still more uneasy by the flow of this matter as he lies in bed. The urinary discharge is, in some instances, affected even early in the disease; in some few by a difficulty or delay in commencing this evacuation; in others, by an inability to void the last drops. In the very last stages the urine cannot be voided without causing an irresistible desire to go to stool.

If we examine the rectum we may there perceive one or two excrescences at the verge of the anus. These seem to be formed partly by the lining membrane of the gut, at least their inner surface appears like a secreting surface or excoriation. In many instances, two level excrescences lie with the adjoining edges in contact, so as to resemble the arytenoid cartilage, or the spout of an ewer. The patient being desired to press down or strain as if at stool, a few drops of a liver-colored fluid are discharged. A hard mass can, in some instances, be felt by pressing around the anus. On introducing the finger into the rectum a hardness and roughness, caused by innumerable protuberances, is to be felt seated at different heights. In some it commences immediately at the very verge of the rectum, and extends nearly as high as the finger can reach; in other cases this morbid condition does not extend beyond that portion encircled by the sphincter; and in others again, the disease is seated still higher up. In all, considerable resistance is given to the introduction of the finger, not only by the narrowness of the canal, and its projecting irregularities, but also by the firm, unyielding hardness of the diseased portion. In one or two instances the canal of the gut was particularly contracted in one spot—as if a small aperture had been left in a membrane which stretched across the gut. The introduction of the finger in all instances has given considerable pain, but if the finger be slowly passed up the gut it will be found gradually to dilate, and then admit the examination with less distress. The hardness which is felt in the substance and neighbourhood of the gut does not always uniformly surround it. In some instances the hardness is felt at one particular spot, as if a tumor lay connected with the coats of the intestine at this part. There is one symptom which is to be met with in, perhaps, every third or fourth person affected with this disease, and which deserves particular attention—it is an external fistulous opening at or near the verge of the anus, which yields a discharge resembling in quantity and quality that of the ordinary fistula, and by no means of the same quality with that passed through the canal of the intestine. I have myself, before I was aware of the nature of the disease, cut one of these patients as for fistula, and have seen more than a few instances in the hands of other practitioners, and always with this remarkable effect, that these incisions, in general, healed as kindly as if the fistula had been the only disease; and in no instance—not even one I had cut, and in which the incision did not heal up—could it be said that the operation added to the subsequent distress of the patient, or exasperated the original disease. Where the fistulous opening occurred in cases with a tumor at some particular spot of the gut, the fistula was found to lead to such tumor.

I have not been able to trace in the relation of these cases that any of the patients experienced any constitutional symptoms which could be considered as precursors or attendants on the first stage of this local disease. Nor does it, during the greater part of its progress, seem to make any impression on the constitution—indeed, my astonishment has been excited on perceiving that such trains of local distress had not produced any sensible decay in the general habit. I should observe, that in one instance only vomiting accompanied the first attacks of this disease. Symptoms of hectic fever first denote the injury done to the constitution. The time at which these appear differ in different individuals: in some so early as six months, while others have remained with the constitution unimpaired for as many years. In one case there was not any regular hectic, the patient was reduced to the most extreme degree of wasting and emaciation that I have ever witnessed. I am inclined to think that the appearance of hectic is the only index that can lead us to a knowledge of the probable duration of the disease.

I have had the opportunity of inspecting only one of those whose death had been caused by the disease. It was the case of a gentleman who had never shown symptoms of regular hectic. Some slight marks of inflammation appeared in different spots; on the small intestines a quantity of fluid, partly composed of coagulated lymph, and partly purulent, was found in the pelvis; the alteration in structure was not confined to the rectum, but was remarkable, though not to an equal degree, along the left colon, as may be seen in the preparation preserved in the Museum of the Royal College of Surgeons. The tumor, or hardened part, was closely in contact with the anterior face of the sacrum, so as to render its separation from the bone both difficult and tedious; the bladder was much thickened and contracted. How far the state of the viscus was a consequence of the decrease in the very scanty secretions of its fluid during the last month of life, I cannot pretend to say.

From the history of the symptoms, and the appearances on dissection, I fear we can derive but little useful information which could lead to a successful mode of treatment. I shall now proceed to state the various remedies I have tried, and the results of such trial. From the reports of Desault, on whose authority I have always placed great reliance, I tried, in almost every case, the effects of dilatation. For this purpose I have used a variety of substances, such as prepared sponges, bougie composition rolled so as to form pessaries of various thickness, tallow candles of various sizes, adapted to the diminished capacity of the canal in each case. My expectations, which had been raised so high at reading Desault's cases, I must say, have been completely disappointed, for when the dilatation has been used in the early stage of the disease, before any symptoms of hectic had appeared, although some had steadily persevered in its use, yet I could not discover much amendment in the symptoms, and the most regular of these persons have at length laid them aside, fully convinced by experience of their total inefficiency to afford even a mitigation of their distress. After the accession, the use of the dilating instruments could not be borne by any patient longer than one week, owing to the pain and irritation they occasioned. Those who had been cut for the fistulous openings near the rectum did not experience any relief from the original disease, even in the cases in which the incisions had healed up. One or two of these patients seemed to think the passage was rather more narrowed after the operation. From the supposition that the disease was cancerous, I have given the solution of arsenic in such doses as to produce the usual symptoms attending its operation on the system, and continued its use for some time, but without producing any alleviation of the suffering. With the same view, and with the same inefficacy, has hemlock been administered. I have used mercury in small doses, so as to excite ptyalism, and have even used this medicine as freely, and for as great a length of time, as is in general sufficient for the cure of secondary venereal symptoms, but have never been able to observe that its use afforded even temporary relief; and not unfrequently has the general health been materially injured by it. Mucilaginous fluids, combined with opium, have appeared to give more relief than any other medicine I had tried; yet this medicine has not uniformly, or even in the majority of cases, been of service. Large leechings are prejudicial.

This disease might be considered as cancerous, but as an objection to this opinion, I must remark, that cancerous diseases are much exasperated by incisions or partial excisions, whereas this disease did not appear to be at all increased by such treatment.

Abscess in the Tibia, by MR. SIMON of St. Thomas's Hospital. SAMUEL TODD, aged 24, a shoemaker, was admitted, September, 27, 1853, on account of painful swelling in the upper part of his left tibia, from which he had long suffered. The following is the account he gave of his illness. On Christmas-day, 1842, he was out skating, and had numerous falls, by which he received severe bruises in several places. Towards the end of the day he had the misfortune to break through the ice, and was for some minutes up to his neck in water. On being taken out, he did not at once return home, but remained for upwards of half an hour standing about in his wet and half frozen clothes. During the following night, he was unable to sleep, on account of shiverings and pains in his joints. In the morning, a medical man was consulted, who considered the disease as rheumatism, and prescribed accordingly. Leeches were applied to a swelling beneath the knee, but no matter formed there. An abscess, however, formed in one heel, which broke, and continued open for a long time. During the whole six months following, he was unable to walk, and suffered throughout that period intense pain in the shin-bone, a little below the knee, where, however, the amount of swelling was but trifling. Subsequently he resumed his work, but was frequently obliged to desist, on account of attacks of intense pain in the bone. An abscess also formed over the ulna, from which scales of bone came away. Six years later, that is, five and a half from the present time, an abscess formed over the painful part of the tibia, on account of which he obtained admission into one of the London hospitals, where he remained until it healed. No bone came away. With the exception of tenderness and pain in the bone, which rendered him unable to kneel upon it, he remained during the year following in good health; but at the end of that time, having caught cold, as he supposed, an abscess again formed over the part. It healed in a month, and remained well for the two years next ensuing, when, for a third time, it opened, and he was re-admitted into one of the hospitals. He was discharged from this hospital in March, 1853, and continued well until within five weeks of the time of his admission under Mr. Simon's care. His condition then was as follows:—About two inches below the left knee-joint, over the inner surface of the tibia, the skin was dusky and inflamed, and there were three or four small spots of ulceration, from which pus exuded, but through which no dead bone could be felt. The whole shaft of the bone at this part looked to the eye larger than that of the opposite side, and this opinion was confirmed on handling it, the bone itself seeming to be generally expanded. The man, who was of dark complexion, looked hectic and extremely ill. He was worn out, in fact, by long-continued pain, having for many nights scarcely slept at all. Mr. Simon having examined the part affected, and entered carefully into the foregoing history of the disease, gave at once a decided opinion that there must be abscess within the bone. Whether that abscess depended on a portion of enclosed dead bone, or whether it was idiopathic, he could not say; but, judging from the account given of eleven years' liability to attacks of very severe tensive pain in one particular spot, unattended by proportionate swelling in the soft parts, generally relieved by leeches, blisters, &c., but always returning with increased severity on any exposure to cold, he considered it almost certain that there was deep-seated mischief. He should, therefore, instead of again being content to relieve temporarily by antiphlogistic means, attempt a radical cure, and trephine the bone. The circumstance that the repeated abscesses which had formed had never given rise to exfoliation, or left sinuses, or materially relieved the pain, rendered it probable, Mr. Simon thought, that they had been but superficial, and had not communicated with the internal mischief.

On October 1, accordingly, the operation of trephining was performed. A crucial incision having been made over the affected part, and the skin dissected up, the bone was found to be rough and rather spongy, but not actually carious. The trephine being applied, the external layer was soft, and cut easily; but the deeper ones were thickened, and much indurated. As soon as the instrument reached the cavity, there welled up by its sides a quantity of thick yellow pus, and, on the plug of bone having been extracted, about six drachms were removed. There was no dead bone. The cavity in which the matter had been lodged was circumscribed in every direction, as was ascertained by probing and introducing the finger. It was lined by a soft villous layer of false membrane. The pus was of the most laudable character, and had no fœtid smell whatever. The sequel of the case may be told in a few lines. Some wet lint was placed in the wound, and the whole covered by a poultice. The severe pain which had before existed never returned. In a few weeks the whole cavity had become filled with firm granulations, and, at the end of November, the man was discharged in excellent health, and with the wound all but healed.—*Med. Times and Gaz.*

On Pedunculated Exostosis of the Long Bones.—We copy from the *Assoc. Med. Jour.* the following abstract of Mr. Syme's paper read before the Medico-Chirurgical Society of Edinburgh:—Mr. Syme remarked upon the loose and ambiguous manner in which the term exostosis had been employed by authors, and the consequent confusion in which the subject was involved. The opinion which Sir Astley Cooper had hazarded as to the origin of the disease in long bones, that it was due to excessive muscular action, he considered was sufficiently met by the two facts—first, that, as in the femur, the exostosis is found by the side of the tendon; and secondly, that it occurs on the distal phalanx of the great toe, where such a cause cannot exist. In young people, the tuberosities of the long bones are frequently enlarged, and occasion much alarm. Mr. Syme, in such cases, finds that symmetry is ultimately restored, and advises non-interference. In his opinion, the occurrence of such cases accounts for a large amount of the so called orthopœdic successes. The ordinary exostosis is not unlimited in growth; but, after a certain increase, it is found to remain stationery. A member of the profession, many years ago, presented himself to Mr. Syme, laboring under what he imagined was subclavian aneurism. Mr. Syme, on making the necessary examination, at once recognized the disease to be an exostosis of the first rib, situated close to the insertion of the scalenus anticus muscle. The subsequent history of this patient showed that the disease did not increase in size. A lady of rank consulted Mr. Syme for a tumor growing into the pharynx, and expressed her wish to have it removed; but, as the tumor presented all the characters of an exostosis, and, from the history, had evidently reached its entire growth, Mr. Syme recommended non-interference. As to the structure of ordinary exostosis, it presents a thin osseous lamina externally, and cancellated tissue within. It is sometimes covered by a thin coating of cartilage. Sir Astley Cooper's definition of this form of exostosis is very defective, and might apply to any bone of the body; and he includes under it two very dissimilar diseases—viz., simple exostosis, and the fibro-cartilaginous tumor of bone. Mr. Syme regretted to find Mr. Paget, in his lately-published lectures; making the same mistake. The two diseases differ *structurally*; the first, presenting a simple bony texture, tipped with cartilage; the second, a cartilaginous matrix, with a bony shell. *Pathologically*, they differ; in the first, there is no tendency to increase, while no limitation can be placed to the growth of the second. Lastly, they differ *practically*. While the first may be successfully removed by the division of its neck, the second can only be extirpated by taking away the whole of the affected bone, or by section at a distance from the disease. Mr. Liston failed to make this distinction, and hence recommended amputation in the case of exostosis of the distal phalanx of the great toe—a practice which was always reprobated by Mr. Syme, and is now abandoned by the profession. With regard to the occurrence of the second form of disease in the upper-jaw, Mr. Syme early saw the folly of attempting to dig it out in piecemeal, instead of removing the whole bone. And as to the priority of having performed this operation, and any merit which might depend thereon, he would merely state, in passing, that he performed it on the 15th of May, 1829; and that an account of the operation appeared in the July number of the *Edinburgh Journal* of the same year. This fact seems to have escaped most authors of students' books, among whom he might mention Mr. Erichsen as the latest. In the case of the humerus, where this fibro-cartilaginous growth is of most frequent occurrence, Mr. Syme had many years ago removed successfully the entire arm for a growth of this kind, which was one of the largest on record. In another patient where the tumor arose by a neck from the middle of the bone, and was about the size of an orange, the portion of the shaft from which the tumor sprung was included within two incisions, and the whole disease was removed. By the use of leather splints, the use of the fore-arm was in a great measure preserved. To avoid confusion, Mr. Syme was of opinion that tumors formed by bone being developed around serous cysts, abscesses, &c., &c., should be named from the causes occasioning the growth. The disease which formed the especial subject of this paper was most frequently met with on the inner side of the thigh, above the condyle, and at the neck of the humerus. Its neck varied from half an inch to an inch in length, and was always placed obliquely to the shaft. The tumor itself was nodulated, covered with cartilage, and of a pearly lustre, and had no communication with the surrounding parts. In a case which Mr. Syme had met with, where the exostosis was situated on the outside of the femur, similar characters were presented. About twenty years ago, Mr. Syme was consulted by a gentleman who presented an example of the disease in question. He recommended avoidance of violent exertion, and learnt from time to time, that the tumor remained stationary. In February, 1851, Mr. Syme was requested by Dr. Handyside to see his old patient, and found a very decided change. There was swelling and deep-seated fluctuation. A cautious prognosis was given. Rest and a blister, to be followed by gentle pressure, were ordered; and the result was looked forward to with some anxiety. In a short time, all the untoward symptoms disappeared, and the exostosis was found to be in its original state. Another case, which fell under Mr. Syme's observation not long after, sufficiently explained these anomalous symptoms. A servant girl, in crossing from Fife to enter the hospital for the same disease, received a blow which fractured the neck of the tumor, and detached it. Fearing suppuration, Mr. Syme cut down upon the loose exostosis, and found it lying in a bag of serum. On examination, all was explained; a synovial membrane covered the tumor, and was reflected in the form of a cyst, so that a double covering existed; and in the present case, from the violence applied, serum had been poured out between the layers. The other day, in company with Professor Simpson, he had seen a young lady who had suffered much agony from an exostosis on the inner surface of the neck of the humerus, pressing upon the axillary plexus. From its situation, it had been deemed incapable of removal; but, on careful examination, Mr. Syme found that its origin could be traced by a narrow neck to the outer and back part of the arm, and, by an incision between the deltoid and the triceps, he was enabled to divide the neck by means of cutting-pliers, and successfully to remove the tumor.

Obliteration of the Innominata by Ligature, by M. Peixoto, of Rio Janeiro. In the *Gazette des Hôpitaux*, March 9th, 1854, p. 115, we find among the reports made to the Royal Academy of Medicine, at its session of March 7th, that of a supposed obliteration of the innominata, by a ligature of reserve! The case was laid before the Academy by M. Velpeau, and is briefly as follows: M. Peixoto, of Rio Janeiro, November 14th, 1851, tied the right primitive carotid at its middle portion, for an erectile tumor of the ear. "Hémorrhagie foudroyante avant la chute de la ligature d'attente à la naissance de l'artère sur le tronc brachio-céphalique; formation du caillot dans le tronc même, après douze jours de compression par la ligature d'attente, qui n'a ni ulcéré, ni enflammé l'artère au point de la coupe." In two months, it is added, the patient was perfectly well. It seems remarkable that the constriction of the ligature, not sufficient to inflame or ulcerate the artery, should so obstruct the current of the circulation, through the trunk of the innominata, as to produce its obliteration, and we do not wonder that M. Malgaigne should have expressed some doubts as to the value of this case, doubts in which M. Velpeau confessed he himself participated.

Excision of the Wrist-joint.—Several instances of this operation have recently been reported in the London journals, but the results have not been very favorable. Mr. Erichsen, on the 19th of October, 1853, removed the first row of carpal bones, with an inch of the lower end of the radius, and a little more than the styloid process of the ulna, by making a transverse incision on the dorsal aspect of the wrist-joint, and two incisions at right angles to this. These bones were in a carious condition. The case went on favorably for over a month the suppuration being free and the health of the patient improving, when she passed from under observation.

Mr. Furgusson operated, August 16th, 1853, upon a suppurating wrist-joint, making longitudinal incisions on the radial and ulnar sides, and a transverse incision, about one inch above the joint, and removed all the carpal bones except the trapezium, with the bases of three metacarpal bones and the styloid process of the ulna. No vessels required ligatures, nor were the extensor tendons injured. At the end of nine months the parts were still discharging freely, with little prospect of healthy cicatrization.

Mr. Furgusson operated on a carious wrist-joint, May 21st, 1853, removing most of the carpal bones, and a small portion of the extremity of the radius, through the openings already existing. Cicatrization did not follow, and, several months after, more carious bone was removed. Eight months subsequently to the first operation, the suppuration continued free.

Mr. Simon performed this operation, Oct. 9th, 1852, upon a young man who had suffered for several months from caries of the metacarpal and carpal bones. All the carpal bones except the pisciform and trapezium were removed, and a portion of one of the metacarpal bones. The incisions in this case were made longitudinally on the anterior and posterior aspect of the wrist-joint, *between* the tendons running down to their destination. The wound made in front was brought together by sutures, but that on the dorsum was left open. The patient improved in general health, suppuration continued free, but at the end of a year, when the final cicatrization was confidently anticipated, the patient was seized with symptoms of fever, of which he died.

Amputation at the Ankle-joint without the Removal of the Astragalus.—MR. SIMON modifies the operation of Mr. Syme by not excising the astragalus in his amputation at the ankle-joint. He considers the stump thus obtained preferable to that of Chopart, because of its being undisturbed by muscular contraction, and better than Syme's, because of its great breadth, its mobility in the joint, and the saved inch and a half thereby. A stump thus made was seen after several years, and was found to have worked very advantageously for the patient.

Amputation at the Hip-Joint.—An unsuccessful case of amputation at the hip-joint, is recorded by MR. MACKENZIE. The following is the history of the case and operation:—(*Edin. Med. and Surg. Jour.*—JAMES O'HARA, aged 18, was admitted into the hospital, under my care, January 3, 1853, with fracture of the right thigh-bone a little below its middle. He had suffered for more than seven years from necrosis of the bone, large portions of which had exfoliated from time to time, and he had left the hospital only a month previously with sinuses on each side of the thigh still discharging matter. Whilst limping along the street on New Year's Day, he was pushed over by a drunken man, and the thigh was fractured by the fall. When brought to the hospital the limb was much distorted, the upper fragment nearly projecting through the skin anteriorly, and the lad was suffering so intensely that he entreated the limb might be amputated immediately. The fracture was adjusted, but the extension required for this only increased his suffering, and on the following day it was necessary to remove the splint, and the limb was kept in the easiest position between pillows.

On the 5th, at the urgent request of the patient, who was much exhausted by his continued suffering. I had him removed to the operating theatre, where I promised to amputate the limb, or remove any dead portions of bone, as seemed best on examination, when he was under the influence of chloroform. On introducing my finger into an opening on each side of the thigh, I found the whole shaft of the femur at the seat of fracture in the state of necrosis, and the very scanty substitute of new bone on one side of it fractured, and detached from the soft parts to the extent of three or four inches. Those of my colleagues who were present at once agreed with me as to the propriety of amputation, the extensive detachment from the soft parts of the thin shaft of new bones rendering the prospect of union hopeless. It was a more difficult matter, however, to decide at what point amputation was to be performed. The entire upper part of the thigh-bone was much thickened; and on introducing the finger into a large sinus, which existed on the back of the thigh, near the tuberosity of the ischium, the bone was felt rough and bare in the neighbhourhood of the lesser trochanter, and the probe here entered a cavity in the bone. Under these circumstances, it appeared doubtful whether division of the bone through the highest part of its shaft would suffice for the removal of the entire disease; and as the weak state of the boy rendered the speedy completion of the incisions very desirable, so as to avoid unnecessary loss of blood, it was deemed prudent not to make any exploratory division of the bone through the trochanter, but at once to disarticulate. The operation was performed, nearly in the way recommended by M. Malgaigne, by transfixion, and the formation of a long anterior flap; but a short posterior flap was also made, by carrying the knife a little obliquely outwards after disarticulating the head of the bone. The limb was thus severed in less than ten seconds, and the hæmorrhage was so effectually controlled by my colleagues, Dr. Dunsmure and Mr. Spence, that scarcely a teacupful of blood was lost.

On the Treatment of Hæmorrhoidal Tumors.—In the discussion which followed the reading of a paper by Mr. Lee before the Medical Society of London (*London Lancet*), on the use of nitric acid in the treatment of these tumors, as recommended by Dr. Houston, of Dublin, Mr. Coulson remarked that he "considered nitric acid to be a remedial agent of very limited efficacy as compared with the ligature. This would be evident from a consideration of the nature of hæmorrhoidal tumors, their situation, and the complications with which they are sometimes attended. These tumors may be divided into two great classes, one kind being not unlike a hot-house grape approaching to ripeness, of a whitish-bluish color, with its mucous covering, smooth, entire, and thickened. These tumors are varices, with the coats of the veins, and the surrounding cellular tissue in a more dense condition than normal. Two or three, or even more, of these swellings are usually present in the same person, and generally produced after an evacuation. Now, to this class of tumors the author of the paper had himself admitted that the nitric acid is not applicable. The surface could not be easily permeated by the acid, and if it could, its extent would be too large to be acted upon by this agent. The next class is of a more vascular kind, resembling a raspberry or mulberry, bleeding on the least touch, and analogous in structure to the erectile tumors in other parts of the body. Two or more of these tumors usually exist at the same time, and their base is large. These also descend at stool, and often bleed considerably. It is to this class that Mr. Lee restricts the application of the acid, but he thought that it could only be of use when these tumors are small and within reach. The situation of these swellings would often render it very difficult to use the acid; they are not always situated close to the anus, but sometimes above the fibres of the inner sphincter, so that the surgeon experiences great difficulty, even with a tenaculum, in keeping them within his reach. To this it may be replied that the obstacle may be overcome by the speculum, and the acid applied high up by means of it. But he thought it very difficult to apply the acid with accuracy in this situation. Then, these tumors are sometimes complicated with fistula in ano, and fissure of the rectum. Only a few weeks ago he had operated on a patient of Dr. Jones's of Dalston, for a fistula of long extent, by the side of which there was a large vascular tumor. Now, in such a case nitric acid could scarcely be employed; one application would not have been sufficient, and the cauterized surface would be sure to come in contact with the edges of the wound. The ligature was effectually applied at the time of the operation for the fistula, and under similar circumstances he should always employ it. The hæmorrhoidal tumors are also sometimes complicated with fissure of the rectum. Now, the application of nitric acid, from time to time, to the tumors would be very likely to irritate the divided surface, and give great pain. Very recently he had operated on a patient of Mr. Bowling of Hammersmith, for fissure of the rectum, in whom there were two vascular excrescences, and in all cases of this kind he is confident the nitric acid would be inapplicable. He came therefore to the conclusion that this agent is of use only in cases of the vascular sort, when the tumors are small, easily reached, and not complicated with fistula or fissure. Why, then, not adopt the ligature, which can be easily applied to all cases, however numerous the excrescences, and aggravated in their nature. It is also effectual in its results, and perfectly safe. He had operated in a large number of cases, and had never met with an unfavorable result—in fact, he had seen, in the practice of others, only one fatal case after the ligature, and death arose in that instance from extravasation of urine. Retention of urine, as is well-known, occurs in the majority of cases after the operation by ligature. In this case the condition of the bladder had been overlooked, and extravasation of urine was the result. The operation by ligature is painful, but the pain soon subsides; it also entails confinement for ten days or a fortnight; but this surely is not too great a sacrifice to make for getting rid of a painful malady. For the ligature, however, to be a safe and effectual remedy, it must be properly applied. Each tumor should be transfixed at its base with the tenaculum, and tied as firmly as possible, outside the instrument, with twisted thread. Before the knot is finally tightened, the tumor should be punctured with a lancet, so that the ligature shall not be subsequently loosened by any exudation from the vessels. If the base of the tumor be too large to be effectually strangulated by one ligature, it should be transfixed by a tenaculum, having an eye at its end, and armed with a double thread, so that one-half may be tied with one thread, and the other portion with the other. Afterwards the strangulated tumor should be returned within the rectum, and the thread secured by adhesive plaster to the nates. The ligatures usually come away within a week, but this is uncertain. In these cases the integument round the verge of the anus is usually loose and hypertrophied, and many surgeons remove it with a knife or scissors at the time of operating on the hæmorrhoidal tumors. He considered that this state of the external integument depended on the condition of the rectum, for he found it disappeared after the internal tumors were cured. He therefore did not think it necessary to meddle with the external integument in the operation, and he especially guarded against involving any of the skin within the ligature. It added much to the discomfort of the patient, and delayed his recovery.

DISEASES OF FEMALES.

On Some Diseases of the Rectum in Women, Resulting from Certain Conditions of the Uterus. Mr. Brown read a paper on this subject before the Medical Society of London. The following is from an abstract published in the *Lancet*:—Enlargement of the uterus from any cause,—whether from the most common and natural one, pregnancy, or from retroversion, hypertrophy, inflammation, distension, or imperfect contraction after labor, fibrous or scirrhous tumor, polypus, hydatids, or from any other disease—alike tends to produce the same result in the bowel; and when the subject is fairly considered, it will become self-evident that the uterine and intestinal affections are in these cases related to each other, as cause and effect; and that, bearing this in mind, we may in many cases the more surely and quickly apply our remedies, and look with confidence for a favorable issue; whereas if the uterine origin of the disease is not suspected, we may treat a woman affected secondarily with constipation, piles, intestinal irritation of a dysenteric character, or other allied disorders by therapeutical agents, directed to the bowel as the primary seat of the disease, and yet the patient shall derive no benefit from any of them. Few surgeons, indeed, can fail to recollect instances in which this kind of treatment has disappointed them, and I hope to be able to show the reason why it has failed. These affections of the rectum may arise, as I am certain they often do, from an enlarged uterus, and that in two ways: firstly, by dragging on the lateral ligaments and elongating them, it falls down under the promontory of the sacrum, and presses on the bowel, interfering with its muscular action, irritating its lining mucous coat, and deranging the circulation in its blood-vessels; and secondly, any hyperæmic disturbance in the uterine circulation increases the force of the circulation in the hæmorrhoidal vessels by establishing a determination of blood to them. Thus by reflecting on the anatomy of the parts, it will be easily understood why and how diseases of the rectum, such as hæmorrhoides, prolapsus, fissure, stricture, fistula, as well as disordered functions of the bowel, as constipation, dysenteric irritation, &c., do sometimes result directly either from the mechanical pressure of an enlarged uterus, or simply from the derangement of the hæmorrhoidal circulation resulting from uterine disease. It is obvious that in the treatment of these various affections so arising, unless the attention of the practitioner is directed to the uterine origin of the disease, no permanent benefit can possibly result. Therefore, when any of these affections occur in females, it is necessary to inquire into the condition of the uterus, which will often at once explain the cause, and indicate the treatment. Mr. Brown then proceeded to demonstrate these remarks by cases. He observed that the hæmorrhoidal veins suffer more from pressure than the arteries, because the coats of a vein are thin, and capable of great distension, and not resilient; whereas the artery is smaller, firm, elastic, but very resilient, and the *vis à tergo* being greater, the circulation of the blood is less liable to interruption. Therefore, as might be expected, the mischief is greater in the veins than in the arteries. Hence we find that the blood often coagulates in the veins, and forms a semi-solid tumor, and the cellular tissue around becomes thickened, and the mucous membrane covering them becomes excessively vascular and sensitive. Mr. Brown observed that he alluded here entirely to internal hæmorrhoids. He then related six cases; 1, hæmorrhoids; 2, prolapsus ani; 3, ditto; 4, fissure of the rectum; 5, constipation; 6, fistula in ano; and in all these cases the disease had been found to have a uterine origin. The uterus was treated first, and the result was in every instance successful.

Nature of Puerperal Tetanus.—In his contributions to Obstetric Pathology, and Practice, (*Monthly Journal,*) Prof. Simpson has the following on the Nature of Puerperal Tetanus:—It will be granted, I believe, by all pathologists that the existence of an injury or wound upon the external parts of the body is by far the most common cause of tetanus. After abortion and parturition we have the existence, upon the interior of the uterus, of a similar state of lesion. All authorities seem now generally agreed as to the facts (1) that the human decidua is, as was maintained in the last century by Krummacher, the thickened and hypertrophied mucous membrane of the uterus, (2) that the epithelial or superficial layer of it separates from its basement or outer layer in abortion and after delivery—and (3) that this separation or solution of continuity of tissue, as well as the rupture of the organic attachments of the placenta from the uterus, leaves the interior of this organ so far in the condition of an external wound, or with a new or raw surface for the time being exposed. Obstetrical tetanus has, in this respect, an exciting cause essentially similar to surgical tetanus. And perhaps the great reason why this state of lesion of the interior of the uterus does not more frequently give rise to tetanus is simply this, that the uterus is itself principally, or indeed almost entirely, supplied by nerves from the sympathetic system, while apparently, as stated by Mr. Curling and other pathologists, tetanus is an affection far more easily excited by lesions of parts supplied by nerves from the cerebro-spinal system, than by lesions of parts supplied by nerves from the sympathetic system.

The following are his views of its treatment:—Let me merely remark that, in obstetrical tetanus, no kind of local treatment to the seat of the original uterine lesion could be well applied, or would probably be of any avail, if applied. And, as to *constitutional* means, perhaps the most important are—

1st, The greatest possible quietude and isolation of the patient from all irritation, corporeal or mental, during the course, and for some time even after the resolution of the disease.

2d, The special avoidance of painful and generally impracticable attempts at opening the mouth in order to swallow; but sustaining the strength of the patient, and allaying thirst by enemata, or by fluids applied to the general surface of the body.

3d, If there is any well-grounded hope of irritating matter lodged in the bowels, acting as an exciting or aggravating cause, to sweep out the intestinal canal at the commencement of the disease with an appropriate enema.

4th, To relax the tonic spasms of the affected muscles, and diminish the exalted reflex excitability of the spinal system by sedatives, or anti-spasmodics; with the prospect of either directly subduing this morbid reflex excitability; or of warding off the immediate dangers of the disease, and allowing the case to pass on, from an acute and dangerous attack, to a sub-acute, and far more hopeful and tractable form of the malady.

Anteflexion as a Normal Condition of the Uterus before Pregnancy. By Boulard, (*Monthly Jour.*)—From observations, embracing 107 dissections, the author concludes that anteflexion is, with rare exceptions, the normal condition of the uterus in the fœtus, the young girl, and woman previous to pregnancy. The body of the uterus is bent forwards on the neck, so as to give the organ the shape of a retort, with the broad end directed upwards and forwards. The axis of the body of the uterus is nearly horizontal, while that of the neck corresponds with the axis of the superior aperture of the pelvis; the fundus is in relation with the posterior wall of the bladder, the anterior surface is directed downwards, and the posterior surface looks upwards: the anterior surface is bent forwards upon itself, the angle of flexion being at the junction of the body and the neck. This flexion cannot be considered a cadaveric change, because, if artificially straitened, the uterus returns to the bent position. In ten examinations in the living subject, the author has found the same condition. By the occurrence of pregnancy the anteflexion is removed, and, if observed after this period, it depends on some pathological condition, as abnormal adhesions, etc.—*Gaz. Med.*

Treatment of Prolapsus of the Pelvic Viscera, and Lacerated Perineum. By Mr. Hilton.—I certainly think the cases of lacerated perineum are worth publishing, and I have great pleasure in sending to you a statement of the reasons which induced me to adopt the operation performed in each of the cases. As far as I know, such an operation had not been done before that period, 1848, with the purpose of relieving the distress and annoyance to which these patients were exposed; but in this opinion regarding the originality of the operation I may be wrong, if so, your better information will set me right.

When you requested my assistance to determine what had best be done in a surgical direction, remembering that the levatores ani have one firm and fixed attachment to bone near the arch of the pubes, and another at the coccyx, and that the internal sphincter ani might be regarded anatomically nearly in the same light in relation to its effects upon the injury to the perineum, and bearing in mind that all muscles contract towards their more fixed point, no matter how that fixity of position may have been acquired, it occurred to me, if I could, by a simple and uncomplicated operation, disengage the coccygeal attachments of the levatores ani, I might allow them to retract the anal aperture and adjacent structures in a direction towards the pubes, as it were, to bury perineal injury deeply in the pelvis, thus enabling the lower fibres of those muscles (which blend with the muscular parietes of the vagina, and perineum) to assume the office of a sphincter to the lacerated opening, by approximating the edges of it, and drawing it upwards towards the pubic arch. In reference to the external sphincter ani, I concluded that, by taking away or separating the coccygeal fixed point of that muscle, I should necessarily change the direction of its contractile power from the coccyx towards the vagina, and thence to the pubes; this I hoped would help to occlude the lacerated opening between the vagina and rectum. Whether I had reasoned rightly or not, the results were as satisfactory, and indeed more so, than I had anticipated. It seemed to myself, that two ulterior purposes might be held in view by such an operation; the first was to ascertain how much of complete relief could be afforded by an operation which promised to be altogether free from both the danger and the severity of the ordinary operation for such cases, and secondly, should no important immediate benefit be derived, it would certainly tend to the advantage of the patient, by putting the parts into a better state (by relaxing them, and so taking off tension) for the easy and perfect accomplishment of the usual but more formidable operation of paring the edges of the lacerated wound, and maintaining them in contact for a time by sutures.

The method of proceeding was as follows:—A narrow sharp-pointed knife was introduced through the skin on one side of the point or free extremity of the coccyx, about half or three-quarters of an inch from its end; it was then passed into the pelvis, between the concave surface of the coccyx and the rectum, special care being taken not to puncture the intestine; the cutting edge of the knife was now made to sweep over the sides and ends of the coccyx, so as to separate from it the coccygeal attachments of both the sphincter and levatores ani; the knife was then withdrawn through the same small opening by which it had been introduced; scarcely any blood escaped from the wound, but a compress of lint supported by adhesive plaster was applied over it to keeps the parts quiet, and to intercept the flow of blood.

That the operation had accomplished its intention of detaching the muscles from the coccyx, was obvious enough, by examining with the finger upon the skin, the median line between the end of the coccyx and the posterior margin of the anus; the resistance which the muscles naturally give to pressure in that position had disappeared, and the anal aperture became retracted or drawn up into the pelvis.—*Guy's Hospital Reports.*

PART FOURTH.

AMERICAN MEDICAL RETROSPECT.

Remarks on Ergodeleteria. By Prof. SLACK, of the Cincinnati College of Medicine and Surgery. (*Western Lancet.*)—In Wood & Bache's Dispensatory, of 1845, page 311, it is remarked "in all the *Graminaceæ*, or grass tribes," "the place of the seeds is sometimes occupied by a *morbid growth*, which, from its resemblance to the spur of the cock, has received the name of *Ergot.*" The celebrated James T. W. Johnston, F.R.S., Professor of Agricultural Chemistry in the University of Durham, England, invited by the State Agricultural Society of New York, delivered at Albany, the capital, a course of very able agricultural lectures in 1850. His remarks on this subject will be found in his published lectures, by Saxton, of New York city, page 72. He fully endorses the permanent poisoning character of the *Secale cornutum*, and the distressing results of the use of infected bread to the poor classes of Europe, in serious and long-continued disease. He adds (in his own words), "it is a curious fact that this same *ergot* is found, not only in rye, but *in various kinds of common grasses*, on which cattle feed, particularly among the rank grasses that grow in marshy places. It was immediately inferred that this kind of *fungus* thus produced in these grasses on which cattle feed, and which, in rye, produced the remarkable feverish effects on the human body, was the cause of similar effects in cattle, which, in many districts" of Great Britain, "prevails to such an extent that the farmers find it impossible to secure calves." Many other proofs, if necessary, might be adduced. My experience coincides entirely with the latter gentleman's positions. 1. That the poisoning in cattle, which affects their milk, butter, beef, and calves, results from an *ergot* or *fungus* production in *grass seeds*, which the cattle, at certain seasons, eat in grazing. 2. That this poisonous principle, affecting the cattle through their products, forms, in our communities, what is designated as the cause of *milk sickness*, formerly so common all around us. 3. That the ergot in rye results from much wet just before seed or grain setting, followed by great heat or high temperature. The spurred rye is found more especially in low or wet grounds; if at all on up-lands, in very wet seasons. The same principles hold good in regard to all grazing or pasture grasses. The seeds are found diseased or ergotized chiefly in low, wet grounds, great heat having prevailed, in rank and vigorous grass.

Hence, milk sickness prevailed fearfully, some years since, up the Licking river and in adjacent lands, opposite Cincinnati, near Brookville, and in perhaps one hundred other places, where it is now unknown. Why now unknown? The cause has been removed by clearing and cultivating the land, and draining the swamps. The remedy, then, is easy. Whenever drainage and cultivation are vigorously pushed, the disease is no longer found; because the strong pasture grass having air and sunlight, the *nidus* of the fungus seeds is not furnished, and the fungus, which is a poison *parasite*, will not grow and ergotize the seed of the grass.

Early in November of 1839 and '40, by request, I visited a very respectable family. I found them all laid down with *milk sickness.* The house was a hospital—all were sick. The lady was retching and vomiting in a manner unusual to me. She died during the night after. What was the condition of the lands around? The family lived in a fertile place, 1½ miles from Memphis, Tenn., on the east bank of the Wolf River. The whole space, except a small strip of land, was frequently overflowed by water. In this particular case I looked round carefully for a cause of the very distressing malady, and was satisfied it resulted from something produced in the vigorous grasses of those *low lands*, since which time botanical facts confirmed my impressions, and led to the sentiments above.

It has been noticed, that at harvest onward to the middle of winter, the disease is found in its worst form. It may have occurred in the spring, but of that I have no information. If so, it must have resulted either from some of the infected seed still remaining, or from the cattle, previously poisoned continuing diseased, grazing in the low swamp pastures.

The chemical character of ergot of rye and of grasses, I have not space to furnish. Indeed, no very reliable analysis of its poisoning parts and simple elements has been given. The smut in maize, Indian corn, is produced by a *parasitic fungus* of poisonous character. I have known many cattle, in the fall season, to die from eating the smutted corn ears left by the huskers when gathering the corn. The ergot of rye and other grasses, as shown, is produced by a *parasitic fungus* of the same genus as the smut in Indian corn. The ergot is possessed of a concentrated poison, or that which is quite active in its operation. In the deleterious principle of both Indian corn smut, or ergot of rye and other grasses, there is, no doubt, a small proportion of nitrogen. This is found to be the fact in regard to *all poisonous vegetables.* Let the nitrogen be in large quantity, and the *vegetable article* is, in general, nutritious as tea, coffee, chocolate; but in tobacco the nitrogen is small in quantity, and the poisonous character is frightful! It ranks, notwithstanding the unnatural use made of it, as a near *relative*,* in poisonous character, to prussic acid, the most terrific poison in the catalogue, to which arsenic is almost nothing in comparison. The *essence of tobacco* and prussic acid are both *vegetable products.* Let tobacco users beware; the affirmation here is no *tale*, but a solemn and impressive *truth.*

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* "Near relative." What the essence of tobacco is has not been decided, so that the expression "near relative" is in point The prussic poison is an acid of peculiar character, not sour, but by combination with bases forming salts is its constitution decided. Nicotine C10 H8 N by Turner, not very certainly decided, is an alkali, yet our positions above are by no means disproved.

In regard to the treatment of ergodeleteria I have said nothing; that is obvious to the experienced practitioner; it is to be removed from the system.

In conclusion, I propose to call the poisoning principle of ergot of rye and other grasses, *Ergodeleteria*, from ergot (French), a spur or cock-spur, and Dēlētērion (Greek), poison. *Translation:* The poisonous principle of ergot of rye and other grasses.

Remarks upon an Analysis of twenty-one Cases of Articular Rheumatism. By Austin Flint, M.D., Prof. of Practice of Medicine, in the University of Louisville.—The results developed by the analysis of the few cases contained in this collection are of importance only as a small contribution toward the accumulation of facts by which, it is to be hoped, the merits, real and relative, of the several remedies that have been noticed may be determined. As the true point of departure for studying the effects of any or all remedies, our science lacks here, as with reference to most other diseases, knowledge of the average duration, etc., of a series of cases in which the disease was allowed to pursue its course undisturbed by medicinal interference. This knowledge cannot be voluntarily and deliberately acquired. Facts bearing thereon can only be obtained slowly, as chance supplies them.

And, at the present moment, we cannot answer the question, What are the intrinsic tendencies of articular rheumatism as respects its continuance, its complications, and remote consequences in the organism? Were we able to answer this question by an appeal to facts, we should then have a criterion by which to estimate the favorable or unfavorable influences of different measures of treatment pursued in a series of cases. As it is, in bringing statistical information to bear on the therapeutics of the disease, we can only study the immediate apparent effects of different remedies, and institute comparisons, in this point of view, and also with reference to the duration of the disease, etc., in different series of cases treated by different methods.

So far as the few observations go which have been presented in this paper, they lead to a distrust of the efficacy of the several remedies employed, rather than tend to increase confidence in our ability to control, by means of them, the progress of the disease. Some of the remedies appear to possess more or less palliative power. This is true of colchicum, bleeding, and opium; but as respects the duration of the disease, it was in some cases short, and in other cases protracted. under different remedies. This being so, it is, perhaps, more philosophical to attribute these differences to variations in the tendencies of the disease, in different cases, rather than to the agency of the remedies used.

It is to be observed that under the use of several remedies supposed to possess more or less remedial efficacy in this disease, the complication most to be apprehended, viz., heart affection, became developed. This was true of colchicum, the nitrate of potash, calomel, and opium. —*Buffalo Med. Jour.*

Observations on the Use of Tinct. Feri. Mur. in Scarlatina. By H. L. Byrd, M.D., Prof. of Materia Medica and Therapeutics, in Savannah Med. College.—During the present year, both erysipelas and scarlatina have prevailed to some extent in this city, and the latter disease has been attended with considerable mortality among young children. After having used the tincture chloride of iron, in erysipelas, with considerable success, as recommended by Dr. Bell (page 126 of your Journal for last year), and remembering the general sequela of scarlatina—often after the most favorable convalescence—I determined to give it a trial in the latter disease. My first impressions, as to its usefulness, were strengthened by the recollection, that chlorine had been recommended in scarlatina, and a knowledge of the value of mur. tinct. ferri, in the anasarcous swelling, which so often results after an attack of that disease. My most sanguine hopes have been more than realised, experimentally, in more than twenty cases. So much am I convinced of its value, that I would not willingly exchange it for all the other remedies which I have heretofore used, or seen recommended, in scarlet fever. I am not aware of the article having been noticed before. Should such have been the case, however, I feel it due to the profession, and to suffering humanity, that the fact should be as widely disseminated as practicable. I will leave others to determine its *modus operandi*, and proceed at once to the narration of some of the most prominent cases, and the peculiar circumstances connected with them. The first case in which I used the mur. tinct. iron, occurred on the 10th July, 1853. The patient, a bright mulatto boy, aet. eight years, exhibited the eruption very distinctly, over the entire surface of the body and extremities; the throat was very much injected, and the ulceration of the tonsils had already taken place. I ordered the bowels to be opened with salts, senna and manna, and the tincture of iron given afterwards, in eight-drop doses, diluted with gum-water, every four hours. Gargle: 1 drachm of the tincture to 4 ℥ water, every three or four hours. This case went on well, and in two or three days the patient was up about the chamber. The second case was the son of H. C., Esq., aged two years. This child is rather delicate, with fair hair and full blue eyes. On my first visit (20th July), I found the skin covered with the eruption peculiar to scarlatina. The entire surface seemed to be involved in the eruption; the tonsils very red and injected; the parotids enlarged and painful to the touch, the left particularly so; the pulse 150, compressible; tongue furred, except at the edges, which were red; considerable thirst; no action on the bowels since the previous day. I directed a dose composed of ol. ricin. ʒiii. sup. carb. soda, grs. ii. tinct. opii. camph, gutt. iv. camphor liniment to be rubbed over the enlarged glands of the neck, and a flannel saturated with the same, applied afterwards; throat penciled three times a day, with a solution of 6 grs. of argent nitrat. to one ounce of rose-water. After the action of the oil mixture, the following was directed to be given in papspoonful doses, every two hours, until visited again, viz.: ℞. Salt tart. ℈ 1, mucil. G. acac, ℥ iv. tart. ant. et Pot. gr. ⅛, tinct. op. camph. ℈ i, M: iced gum-water allowed as a common drink On my visit in the afternoon, I learned that the bowels had been acted upon once or twice, and the pulse was reduced by the last mixture to 140, and the skin was soft, though not actually moist.

The child being delicate, and of somewhat strumous habit, and having been pleased with the success of the iron in the preceding case, and believing the indications even stronger in this one, I resolved to venture on its use at once. I directed mur. tinct. ferri. 50 drops, mucil. g. arabic, ℥ ii, M. a teaspoonful to be given every four hours. Suspend previous mixture and continue iced gum-water.

On my visit the following morning, I found the skin less red; pulse 130; no action of the bowels since yesterday; urine somewhat increased in quantity; tongue clean and red; throat the same; glands the same. Continue treatment to throat and neck; also, the iron as before. Evening visit—found the patient in much the same condition as at last visit: pulse 128. The next morning the skin less red; appetite increased; tongue clean and red; some thirst, which, however, is rapidly allayed by the iced gum-water; neck and throat the same. Ordered the castor oil-mixture mentioned above; directed the iron treatment to be resumed after its action. Did not call again until the following morning, at which visit I found the bowels had acted well the previous day; condition generally improved; pulse 118. The iron was continued, and the lunar caustic twice per day to the throat. The next morning the skin was much paler, the throat much improved, the pulse 110. The bowels being bound, a dose of castor-oil was prescribed, and, after its action, the iron to be resumed. The following morning, I found all the symptoms so much improved, that I did not deem it necessary to continue my visits.

The epidermis had commenced to desquamate, and the throat appeared well, beyond a slight redness, which remained for a few days, as I subsequently learned. The patient continued improving for near two weeks, when he was taken with slight fever, after one or two rides during the afternoon. During this attack, the glands of the neck, which had not entirely subsided from the first illness, became swollen and very painful, and, despite of every effort, suppuration took place on the left side. I opened the abscess, kept it poulticed with flax-seed, and put my patient on the syrup of the iodide of iron in six-drop doses, four times per day, with one-half a grain sulphate quinine, three times per day, and in a few days he was well. I have been thus minute in the details of this case, as it was the only one out of twenty in which suppuration occurred; and, further to convey a correct general idea of the course usually pursued. In no case did anasarca supervene, and the cases were usually cured in from seven to ten days. It is proper that I should remark, that occasionally other remedies, as blue pill, rhubarb, etc., were found to be necessary; and in all cases, with one or two exceptions, I made an effort to lessen the frequency of the pulse, and to determine to the surface before commencing with the iron. Minute doses of tart. ant. or ipecac., in combination with other diaphoretics, were used for this purpose; and in all cases in which the tongue grew dry under the use of the iron, it was suspended until that difficulty was removed. I found but few cases, however, in which the dryness of the tongue was traceable to the iron. I used demulcents and cool drinks, as asked for, throughout the disease. In one case treated recently, the infant child of the Hon. E. J. H., I used no other remedy than the mur. tinct. of iron. It was given in doses of from ½ to ¾ of a drop suspended in gum arabic water, three times per day. Notwithstanding the throat was considerably inflamed, and the glands enlarged, this patient convalesced rapidly, and was well in four or five days. The child was an infant at the breast, six or seven weeks old. Two other cases had previously occurred in the same family, in one of which I scarified the tonsils, and blistered the throat, finding both these expedients necessary to relieve the unusual inflammation and tumefaction of the tonsils which existed. It yielded readily to the iron, after the reduction of the high arterial excitement that ushered in the attack. In this case, complete desquamation of the epidermis occurred. The last case worthy of notice is that of Ella, aged eight years, the eldest child of Dr. R. A., now under treatment (Dec. 2d). I saw her first five days ago. The eruption was very distinct, and the throat unusually ulcerated; the tongue was coated with a brown fur, except the edges, which were red; the bowels constipated; pulse 145. I prescribed three grains each, of mass. hydrarg., pulv. rhei., and creta preparat., to be followed by castor-oil in four hours. After the action of the oil on the bowels, the pulse remaining the same, and the skin dry, I used a mixture composed of sal. tartar, ʒss, mucil. g. acac. ℥ vi., tart. ant. et pot. gr. ⅛, and paregoric ʒss, in papspoonful doses, every two hours, for ten or twelve hours; after which the mur. tinct. iron was begun with and continued in doses of ten drops, three times per day, until this morning, when it was deemed no longer necessary. This case is alluded to, simply on account of the obstinate character of the ulceration and inflammation of the throat. I have used the mixture of silver in different proportions to the ounce of water, without much benefit until yesterday, when a solution of twenty grains to the ounce was used. Gargles of tannin and pyroligneous acid, were also resorted to as auxiliaries during the intervals that the caustic was suspended. A circumstance worthy of note was, that little or no swelling or enlargement of the glands of the neck occurred during the entire case. After the solution was used, as just stated, two or three times, without any perceptible improvement in the ulceration, I applied the solid nitrate of silver with complete success.—*Charleston Medical Journal.*

On the Influence of Chloride of Sodium on Absorption and Exhalation. By Henry Parker, M.D., of Ill.—From the experiments and inquiries into the influence of chloride of sodium upon the blood, we observed three important facts:

1st. An increase in the capacity of this fluid for the absorption of oxygen

2d. An increase in the amount of carbonic acid exhaled, and

3d. An augmented excretion of urea.

The effects observed upon these several processes are so marked that every intelligent and scientific physician must see the importance of their due consideration in the treatment of certain forms of diseased action. With these facts before us, we infer, that the use of this substance is indicated in those diseases dependent upon or accompanied by a too small supply of the former, and an undue accumulation and retention in the system of the latter. Does experience confirm this view, and the results of its use in such cases establish the correctness of our deductions? If we call to mind the pathology of those diseases, in which its use has been attended with the most marked benefit, we observe the existence of one or all of these three conditions, viz.: A diminished supply of oxygen, with an abnormal accumulation and retention in the system of carbonic acid and urea.

Congestive pneumonia affords us a good illustration of this,—a want of efficient oxygenation of the blood, and the due elimination of carbonic acid and those morbid substances designed for excretion. This want, oftentimes, if not generally, constitutes the only real source of danger to the welfare of the patient. That other means and other remedies may be demanded to subdue the local trouble, to remove the cause, of which this is an effect, I admit; but the period of time required to effect this is often protracted,—the patient sinking from a want of efficient oxygenation of the blood. This fact indicates the use of such remedy, combined with those adapted to the removal of the cause, as will most effectually promote the due interchange of these elements, viz., oxygen and carbonic acid. Reasoning, then, from the known effect of chloride of sodium upon the blood, in promoting the absorption of oxygen and elimination of carbonic acid, we infer that in this substance do we find such a remedy. And the fact, also, that the greatest apparent good results from its use, when such pathological conditions exist, it seems to me, furnishes strong evidence that its *modus operandi*, or rather, *morbus curandi*, is through its influences upon absorption and exhalation.—*N. W. Med. and Surg. Jour.*

Case of Trephining for Epilepsy. By W. STONE, M.D., Prof. of Surgery in Medical Department of University of La.—The use of the trephine as a remedial agent in epileptic convulsions, cannot be recommended with much reason or propriety; yet there occasionally occur cases where, from disease of the bones of the skull, internal ostitis or thickening of the membrane, the pain and suffering are more or less localized, and lead to the supposition that such may be the cause of the convulsive attacks mentioned in the following case:

In 1841, I was requested to see, in consultation with Dr. Davezac, Mr. F——. I found him laboring under epilepsy, which had assumed the periodic form, returning every four weeks, from the effects of which he scarcely recovered before the time of another attack. I recollected to have seen the patient before, some time in 1839, when he was suffering from tertiary syphilis, iritis, and a soft node on the forehead, which was absorbed under treatment. Dr. Davezac had encouraged him with the hope of relief from an operation, but recognizing the patient, and believing there had been absorption instead of depression, I declined operating. The disease, however, defied treatment, and having in the mean time made a post-mortem examination of a case, which showed internal ostitis, evidently the cause of convulsions, I was induced to apply the trephine; nothing was discovered, unless a thickening of the dura mater; the patient expressed himself relieved from certain indescribable sensations; he had a slight convulsion that evening, and no return for twelve years. A year ago he had a recurrence of his convulsions, the periods between each attack becoming shorter, until they recurred every week. Applying to me again for relief, and his condition having been so much improved by the former operation, I again applied the trephine, operating on the edge of the former opening; he has again been relieved, with no return of convulsions.—*N. O. Med. News.*

Concluding Remarks upon the Treatment of Miasmatic Fever. By G. S. Upshur, M.D., Surgeon U.S. Marine Hospital, Norfolk, Va.—In perusing the foregoing observations, which are taken indiscriminately from a large number of cases of miasmatic fever admitted into the hospital during the last summer, two things will strike the attention; the exhibition of quinine in large doses, regardless of the stage of the disease, and always with benefit, and the small quantity of the mercurial preparations prescribed. If the bowels were constipated, and the condition of the patient was such that he could afford to run the risk of another paroxysm, the treatment was usually commenced with a mercurial cathartic, of which there is none better than calomel and jalap, in Dr. Rush's old dose of "ten and ten." As a general rule, however, the so-called preparatory treatment, in uncomplicated miasmatic fever, is unnecessary, and usually entails a loss of time which frequently can ill be spared.

I am no advocate for the doctrine that *quinine is a sedative*, as that doctrine is promulgated and insisted upon by some quinine enthusiasts. As I have said elsewhere, it is, undoubtedly, a sedative, but not in the same sense that digitalis is a sedative. It may be given during the height of the febrile paroxysm, but not if the fever is the result of pneumonia or arachnitis; and he who would give quinine in these diseases to reduce the pulse, because he had seen it produce such an effect in remittent fever, would commit a great blunder. The truth is, quinine is a medicine *sui generis*, and its impression upon the system, like that of many other remedies, varies with the condition of the patient and the cause of his disease. Administered in large doses to a healthy person, it undoubtedly quickens the pulse, flushes the face, and brightens the eye, and so far it may be ranked as a stimulant. Furthermore, I believe, nay, I *know*, that in inflammatory affections of the brain and its membranes, quinine is decidedly excitant, and, given in large or small doses, will increase the head symptoms *invariably*. This knowledge of the effect produced by quinine upon the healthy and inflamed brain, has unfortunately led to a timid use, or almost entire abandonment, of the agent in all cases where the head is affected. And in this consists the error of those who refuse to give it in miasmatic fever, where there is even the slightest tendency to the brain. Inflammation of the brain is a very rare complication in this fever, while drowsiness, coma, and even convulsions, are frequently its accompaniments. There is a vast difference, however, between *these* symptoms and *inflammation;* and large doses of quinine will be found the best treatment for them.—*Virginia Med. and Surg. Jour.*

On Iodine Infections in Leucorrhœa. By THOMAS T. RUSSELL, M.D.—We have used it varying in strength from one to four grains of iodine with double the quantity of the iodide of potash to an ounce of water. It may be applied once or twice a day, or once every second or third day, as occasion may require. In some of the severer forms of this complaint, attended with considerable abrasion and ulceration, the diluted tincture may be used with great advantage.

Its curative powers are far greater than the nitrate of silver,—which, in our hands, often seemed to exasperate the complaint,—or any other remedy with which we are acquainted.

As an internal remedy in leucorrhœa, iodine has been recommended by Goden, Broglio, and other continental physicians; but, in our hands, notwithstanding the genito-urinary organs appear to be most susceptible to its action, it has proved of little or no value; our experience with it, in this respect, coinciding with that of Eberle, Barbour, and others of our own country.

Müller, Gimelle, and Jewell applied it in the form of ointment to the inner sides of the thighs with success, and are advocates for it.

We have never seen or heard of iodine being used as recommended in the foregoing, and do not know whether there is any originality in it; neither do we care; our object being simply to call the attention of the profession to it, with the hope that they may be so far influenced by our humble testimony in its favor as to be induced to give it a fair trial.—*Amer. Jour. Med. Sci.*

MISCELLANEA.

Iodine as an Antidote to Curare.—We find in the *Gazette des Hôpitaux*, for March 9th, the relation of several experiments by PROF. BRAINARD of Chicago, and DR. J. W. GREEN of this city, both temporarily resident in Paris, to prove the efficacy of iodine as an antidote to the poison known in this country as curare or woorara. The following are their conclusions:

1. The solution of iodine and iodide of potassium is, within certain limits, a perfect antidote against curare, and when mixed with the poison, also in solution, destroys its poisonous effects.

2. The solution of iodine, injected immediately after the solution of curare, neutralizes completely its effects, provided we apply a cupping-glass for the purpose of arresting the circulation until the iodine unites with the poison. It neither produces suppuration, nor loss of substance by gangrene.

3. The solution of iodine, applied to the surface of a deep wound of the muscles in which the curare has been introduced, prevents the effects of the poison.

4. The solution of iodine has precisely the same action upon the

curare, that it had previously been shown to have upon the poison of the rattlesnake.

5. The identity of effects of the curare and the poison of the rattlesnake, the similarity of odor, and the effect of iodine upon their action, give much weight to the opinion already advanced, that the active principle of curare and analogous preparations is nothing more than the poison of the rattlesnake preserved in a particular manner.

An Act to promote Medical Science.—Thanks to the good sense of our legislators, this bill has become a law. We have barely room to give the bill, which we do without comment.

"An Act to promote Medical Science. Passed April, 1854. The People of the State of New-York, represented in Senate and Assembly, do enact as follows:—It shall be lawful, in cities whose population exceeds thirty thousand inhabitants, to deliver to the professors and teachers in medical colleges and schools in this State, and for said professors and teachers to receive, the remains or body of any deceased person, for the purposes of medical and surgical study; provided that said remains shall not have been regularly interred, and shall not have been desired for interment by any relative or friend of said deceased person, within twenty-four hours after death; provided, also, that the remains of no person, who may be known to have relatives or friends, shall be so delivered or received, without the consent of said relatives or friends; and provided that the remains of no one detained for debt, or as a witness, or on suspicion of crime, or of any traveller, nor of any person who shall have expressed a desire in his or her last sickness that his or her body may be interred, shall be delivered or received as aforesaid, but shall be buried in the usual manner; and provided, also, that in case the remains of any persons so delivered or received shall be subsequently claimed by any surviving relative or friend, they shall be given up to said relative or friend for interment. And it shall be the duty of the said professors and teachers decently to bury in some public cemetery the remains of all bodies, after they shall have answered the purposes of study aforesaid; and for any neglect or violation of this provision of this act, the party so neglecting shall forfeit and pay a penalty of not less than twenty-five nor more than fifty dollars, to be sued for by the health officers of said cities or of other places for the benefit of their department.

"The remains or bodies of such persons as may be so received, by the professors and teachers as aforesaid, shall be used for the purposes of medical and surgical study alone, and in this State only; and whoever shall use such remains for any other purpose, or shall remove such remains beyond the limits of this State, or in any manner traffic in the same, shall be deemed guilty of a misdemeanor, and shall, on conviction, be imprisoned for a term not exceeding one year in a county jail.

"Every person who shall deliver up the remains of any deceased person, in violation of or contrary to any or all of the provisions contained in the first section of this act, and every person who shall receive said remains, knowing the same to have been delivered contrary to any of the provisions of said section, shall each and every of them be deemed guilty of a misdemeanor.

"All laws, so far as inconsistent with this act, are hereby repealed.

"This act shall take effect immediately."

OBITUARY.

Death of Prof. R. L. Howard. Dr. Howard died at his residence, in the city of Columbus, O., on the 16th of January last, in the 45th year of his age. The following are some of the particulars of his professional life, as we gather them from the *Ohio Medical and Surgical Journal*—the Journal of which he was editor at the time of his decease. Dr. Howard was born at Andovertown, Vt., in the year 1809. Nursed in the lap of poverty, his energies and faculties were cramped, and being destitute of the means of acquiring even a common education, he was necessitated to employ himself at hard labor with an *ax* and *maul* through the day, and then to take as much of the night as he could spare from sleep, for the purpose of improving his mind. He formed the resolution of studying medicine when quite young, and, even while a student, he was frequently compelled to suspend his studies and resort to drudgeries, in order to get the means to further his design. Possessed of an indomitable perseverance, he surmounted all difficulties, and at the age of 22, graduated at Berkshire Medical College, Mass. After this event, he settled in the practice of his profession, at Windham, Ohio, but soon after removed to Elysia, Ohio. During the first ten years of practice, his business was not sufficient to place him above want. In 1844, he removed to Columbus, O., where, in the capacity of a general practitioner, his success was rapid. In 1847, on the removal of Willoughby Medical School to Columbus, he was appointed to the chair of Surgery, and subsequently to the same chair in the Starling Medical College. After the death of Prof. Butterfield, he assumed the editorial management and proprietorship of the *Ohio Medical and Surgical Journal*, and, as before stated, was editor of the same at the time of his death. As an editor, he was always courteous and dignified, knowing but one object, and that, the honor and dignity of the profession; as a surgeon, he was among the first of his State, if not of the age. In him the profession have lost an earnest co-laborer, and the science of medicine a warm and devoted friend.

Death of J. S. Shuler, M.D. Dr. Shuler died in San Francisco, Cal., on the 27th of February last, aged 63 years. Dr. S. was a native of this State, (N.Y.,) and, for nearly twenty-five years, practised his profession in Lockport. He was a licentiate–of the New-York State Medical Society of 1818, and some time after received, we understand, the degree of M.D. from the Ohio Medical College. During the period he resided in Niagara county he occupied a high position among his professional brethren. In 1843 he was elected president of the Niagara County Medical Society, and on several occasions occupied offices of distinction in the gift of the society. In 1850 he emigrated to California, and soon after his arrival in San Francisco established a private hospital in Mason street, in which he exercised principally the duties of his profession to the time of his death. Through a long series of years (it is said by one who knew him well) he maintained the honor and dignity of his profession. Ardently attached to the profession of his choice, he was never more happy than when in the active exercise of its arduous duties. Benevolent in his disposition, his doors were closed to none who required his professional services, and at no time, from the opening of his hospital to his death, was he without patients who were receiving gratuitously the benefits of his professional skill. He died after an illness of only twelve hours, of apoplexy.

DEATH OF NELSON SHOOK, M.D.—Dr. Shook died in this city (N. Y.) on the 27th day of March, in the 41st year of his age. He was a graduate, we believe, of the College of Physicians and Surgeons of this city of 1836. In the summer of 1836 he was Resident Physician of the New-York Hospital, and published in the *New-York Journal of Medicine and Surgery*, 1839, a report on the cases of fever admitted into that Institution under the care of Dr. F. U. Johnston.

DEATH OF GEORGE CHEYNE SHATTUCK, M.D.—Dr. Shattuck died in Boston on the 18th of March, in the 71st year of his age. He was a native of Templeton, Mass. He was a graduate of the University of Pennsylvania in 1807, where he presented an inaugural dissertation *on Hydrocephalus Internus.* Previous to graduation, he had obtained the Boylston prize medal for the best dissertation "*On the difference between mortification produced by an external cause, and that which arises from a constitutional defect; the diagnostiks and proper mode of treatment.*" This, and two other dissertations by the same author, were published in a volume at Boston in 1808. Dr. Shattuck was gifted above common men in the faculties of quick discernment and ready adaptation. His discrimination in disease was remarkably acute, and he brought to the aid of his patients the advantages of a quick eye, a large experience, a kind heart, and a prompt interposition of the appliances of the healing art. In his life the profession of medicine will find much to remember—of great and honorable purpose, of philanthropy, of scientific and comprehensive knowledge. His name will be transmitted to posterity as one of the noblest benefactors of medical science, for which the city of Boston is so eminently distinguished.

DEATH OF DR. STEPHEN CUMMINGS.—Dr. Cummings died at Richmond Island, Me., on the 2d of March last, aged 82 years. He was a native of Andover, Mass.; studied medicine with Dr. Kittridge, and, after completing his studies, commenced practice in Waterford, Me., in 1794. In 1801 he removed to Portland, where he acquired a good reputation and an extensive practice.

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THE

NEW-YORK JOURNAL OF MEDICINE,

AND THE

COLLATERAL SCIENCES.

EDITED BY

SAMUEL S. PURPLE, M.D.,

AND

STEPHEN SMITH, M.D.

Verumque est, ad ipsam curandi rationem nihil plus conferre, quam experientiam.—Celsus.

VOL. XIII. . . . . NEW SERIES.

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TO READERS AND CORRESPONDENTS.

The Pathology and Treatment of Strictures of the Urethra, both in the Male and Female. Being the Treatise for which the Jacksonian Prize for the year 1852 was awarded by the College of Surgeons of England. By HENRY THOMPSON, F.R.C.S , &c. London: Churchill, 1854. 8vo, pp. 324. (From the Publisher.)

A Review of this work will appear in a subsequent number.

Epilepsy and other Affections of the Nervous System which are marked by, Tremor, Convulsions, or Spasm, their Pathology and Treatment. By CHARLES BLAND RADCLIFFE, M.D., Licentiate of the Royal College of Physicians, etc., etc. London: Churchill, 1854. 8vo, pp. 144. (From the Author.)

Materia Medica, or Pharmacology and Therapeutics. By WILLIAM TULLY M.D. Volume 1, No. 10. Springfield, Mass., 1853.

☞ It affords us much pleasure to announce to our readers the reception of another number of this great and truly valuable work. We regret, however, to learn that the distinguished author has suffered from illness "brought on by exposure to cold and fatigue, in attending to urgent calls from out of town,"—which is the excuse for the delay of this number. In the passage through the press of a work of such magnitude and importance as this, it is not surprising that there should be an occasional delay, and in such an event subscribers must not allow feelings of distrust to arise. We learn from an advertisement in this number, that the manuscript of the 2d volume is in a more complete state, and that its passage through the press will proceed more rapidly.

Comparative Anatomy. By C. TH. VON SIEBOLD and H. STANNIUS. Translated from the German, and edited, with Notes and Additions recording the Recent Progress of the Science, by WALDO J. BURNETT, M.D. Volume I. Boston: Gould & Lincoln, 1854, 8vo., pp. 470. (From the Publishers.)

The Science and Art of Surgery, being a Treatise on Surgical Injuries, Diseases and Operations. By JOHN ERICHSEN, Professor of Surgery in University College, London, etc., etc. Edited by JOHN H. BRINTON, M.D. Illustrated by three hundred and eleven engravings on wood. Philadelphia: Blanchard & Lea, 1854. 8vo, pp. 908. (From the Publishers.)

Woman: her Diseases and Remedies. A Series of Letters to his Class. By CHARLES D. MEIGS, MD, Professor of Midwifery and the Diseases of Women and Children, in the Jefferson Medical College at Philadelphia, etc., etc. Third edition, revised and enlarged. Philadelphia: Blanchard & Lea, 1854. 8vo, pp. 672. (From the Publishers.)

An Examination of the Practice of Bloodletting in Mental Disorders. By PLINY EARLE, M.D., author of "A Visit to Thirteen Asylums for the Insane, in Europe," etc., etc. New York: S. S. & W. Wood, 1854. 8vo, pp. 126. (From the Publishers.)

☞ This is an exceedingly interesting monograph—like every practical production from its accomplished author, it deserves to be read by all who are brought in contact with the unfortunate subjects of insanity. We shall notice this work more fully in a future number.

Clinical Lectures on Pulmonary Consumption. By Theophilus Thompson, M.D., F.R.S., Physician to the Hospital for Consumption and Diseases of the Chest, etc., etc. Philadelphia: Lindsay & Blakiston, 1854, 8vo, pp. 258. (From the Publishers.)

Essay on the Mechanism and Management of Parturition, in the Shoulder Presentation. By Wm. M. Boling, M.D., of Montgomery, Alabama. Charleston, 1854. Pamphlet, pp. 91. (From the Author.)

☞ This is a very elaborate and, in many respects, complete essay on one of the most important deviations from the normal presentation in parturition. The author enters at great length into the various questions involved in this complication, exhibiting a commendable familiarity with the literature of his subject, as also a personal knowledge of its practical difficulties.

On the Subject of Priority in the Medication of the Larynx and Trachea. By Horace Green, M.D. New York: 1854. Pamphlet, pp. 17. (From the Author.)

☞ In this publication the author reviews the history of topical applications to the larynx, particularly with reference to his own practice..

Clinical Report on Dysentery, based on an Analysis of forty-nine Cases, with remarks on the Causation, Pathology, and Management of the Disease. By Austin Flint, M.D, Buffalo, 1853.

Clinical Report on Chronic Pleurisy, based on an Analysis of forty-seven Cases. By Austin Flint, M.D., Buffalo, 1853.

☞ These reports originally appeared in our Western cotemporary, the *Buffalo Medical Journal.* They contain the results of a careful analysis of a sufficient number of cases to confirm many points in the pathology and therapeutics of these grave diseases, which are important to the practitioner. They are fair examples of the method of studying diseases according to the numerical system—a method for which the Author has a decided *penchant.* Like every contribution to medical science from Prof. Flint, they are of permanent value to the physician both for study and reference.

A Monograph on the Fœtal Circulation, with three illustrations on wood. By E. R. Peaslee, A.M., M.D., Professor in Dartmouth College, and in the N. Y. Medical College, &c. From the American Medical Monthly, May, 1854. New York, 1854. Pamphlet, pp. 26. (From the author.)

☞ The design of this paper is to examine the commonly received opinions in regard to the Physiology of Fœtal Circulation, in the light of the present state of physiological science. It is an able and candid production.

Remarks on Croup and its Treatment. By Horace Green, M.D. New York, 1854. Pamphlet, pp. 21. (From the Author.)

☞This pamphlet illustrates the treatment of Croup, by the topical application of nitrate of silver to the larynx: a method of treatment which the author has advocated several years.

Annual Report of the Governors of the Alms House, New York, 1854.

Catalogue and Circular of the Albany Medical College, Spring Term, 1854.

The Transactions of the Iowa State Medical and Chirurgical Society, Third and Fourth Sessions, held at Fairfield, May, 1852, and Davenport, June, 1853. Burlington, 1854.

Transactions of the Medical Association of the State of Alabama, at its Seventh Annual Session, begun and held in the city of Montgomery, January 10th and 12th, 1853. With Constitution, Code of Medical Ethics, and List of Members. Mobile: 1854. 8vo, pp. 190. (From the Society.)

Annual Report of the City Inspector of the City of New York, for the year 1853. New York, 1854.

Quarterly Summary of the Transactions of the College of Physicians, of Philadelphia. From February 1, 1854, to April 5, 1854, inclusive. Philadelphia, 1854.

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THE NEW-YORK
JOURNAL OF MEDICINE
FOR JULY, 1854.

PART FIRST.

ORIGINAL COMMUNICATIONS.

ART. I.—*Review of the Climate and Diseases of Certain Portions of the State of California.* By F. W. HATCH, M.D., Sacramento City, California.

THE CLIMATE of a particular region of country, depending, as it does, upon conditions varying with its equatorial relations,—its soil, elevation, cultivation,—its proximity to the Ocean,—the prevailing currents of wind, and the many phenomena and modifications which arise from these conditions, presents a field for study so vast, as scarcely to admit a just and intelligent investigation within the limits of a short essay, without more enlarged and extensive means for examination than those we have been enabled to obtain.

The difficulties attending such an investigation, growing out of the intrinsic nature of the subject, are here, in California, greatly increased by extraneous circumstances peculiar to the State. But a short time since emerged from a condition of semi-barbarism, and attracting to its shores a large influx of population, eager in the pursuit of wealth, and with no abiding interest in the country, no attachment beyond the realization of their golden dreams, it has, until recently, presented a meagre field for the cultivation of science, or for intellectual improvement. The passion for gold —the thirst for riches—absorbed every other emotion of the soul, and in the hot and entrancing pursuit, the opportunities which might have been possessed by the earlier settlers for recording facts relating to the climate of the State, during a succession of years, were, for the most part, if not entirely, neglected.

The want of the instruments necessary for scientific investigations, and the expense attending their procurement in this State, has, also, greatly retarded the acquisition of correct information, and prevented the prosecution of those meteorological observations so essential to the proper understanding of the subject under consideration. With these difficulties in our way, we shall not attempt a consideration of all the phenomena which modify the character of the climate of California, and which involve an intimate study of its physical condition and peculiarities, but content ourselves with a brief review of some of its more prominent features, considered in a medical point of view;—its influence in the production of disease and as a beneficial agent,—its pathologic and therapeutic tendency. Even with this limited view of the subject, there is scarcely a region in the world presenting so great a variety in its climatic features, where extremes are so marked, where the physical constitution of the country is so diversified within an equal area, as in California.

Bounded on the West by the Pacific Ocean, and extending from the 42d parallel of latitude on the north, its northern limit, to the 32d on the south, its southern boundary, and stretching east to the summit of the Sierra Nevada, in the 120th meridian, east longitude, it presents a diversity of geographical arrangement, of temperature, and of the various other elements which mark the peculiarities of different climates, but seldom observed within the same parallels of latitude and longitude.

It is a fact, frequently noticed, that countries on the

Pacific side of the great chain of mountains which divide the eastern from the western section of North America, vary remarkably in temperature from regions on the Atlantic side, similarly located, in respect of latitude and elevation; the former presenting a temperature and atmospheric dryness, strongly contrasted with localities under the same conditions in the latter. This fact is amply exemplified by the difference observed between the winters in this country, and those in the same latitudes east of the Rocky Mountains. Regions of country, in a latitude which, on the Atlantic, exhibit, during the winter months, frequent snow storms, and a thermometrical descent to several degrees below zero, are in the other division noted for the mildness and equability of their winter season; snow is seldom seen, the ground rarely frozen, and vegetation, though checked for a time, is speedily renewed under the quickening influence of the periodical rains and warm sun which succeeds them. Compare, for example, the climate of St. Louis, of Washington, or even of Charlottesville, Va., with that of Sacramento, in this State. Though the difference in latitude is, in either, less than half a degree, yet how great is the difference observable in the extremes of temperature! Less in the case of Charlottesville than in either of the others, yet, even there, the extreme of winter is in wide contrast with Sacramento; and it is not very uncommon for considerable snow to fall. Even as late as the second of March, we have seen the ground completely covered with a snowy mantle.

In forming an estimate of the climate of California, however, the geographical arrangement of the country, and the winds prevailing in different localities, must be particularly noticed. Embracing within its limits the latitudes of Savannah and Boston as its northern and southern extremes, it presents a variety of climatic phases but little corresponding with its equatorial relations, or with the latitudes it comprises.

These opposite characteristics are often most obvious in localities situated within a comparatively short distance of each other, and depend upon their different elevation, or their respective exposure to the winds from the ocean. At San Francisco, for example, in latitude 37° 47′ 35″.6, the climate differs widely from that of localities only a few miles in the interior. In the former, during the summer season, the high winds which rush down the bay from the ocean, loaded with oceanic vapor, create so great a degree of chillness as to render the warmest clothing necessary for comfort. The peculiar position of the city is such, indeed, as to give to this locality a climate whose features are, in some respects, remarkably different from any other portion of the State. Situated on a bay which extends north and south a distance of more than seventy miles, it is secluded from the ocean by a mountain barrier, except at the break or gap in which the city itself is built. Through this gap the bay communicates with the ocean by a strait, a distance of some four or five miles, allowing a free and uninterrupted current for the winds which pour in from that quarter during the greater portion of the year. These winds, rushing down the bay, loaded with vapor, create a degree of chillness in the atmosphere, during the summer months, more especially, in wide contrast with that which prevails in localities sheltered from the ocean, and the strong west and north-west winds which proceed from it. Indeed, it has been remarked that the vicinity of the Golden Gate is colder during the summer months than any point on the Pacific south of Columbia river.

A series of papers published in a weekly journal in San Francisco, by Doct. H. Gibbons, of that city, furnishes minute and interesting statistical information of the climate of the place and its immediate vicinity. Of these we shall freely make use, as affording, at a glance, a summary of great value in studying the peculiar features the locality presents. They refer to the winds, the barometrical phenomena, and the temperature, and, from the well known ability of their author, and the accuracy and care with which his investigations have been pursued, are more reliable than any others we possess. The observations upon which they are based were taken at sunrise, at noon, and at 11 P.M., and embrace a period of fourteen months, viz., from Dec. 1850, to Jan. 1852, inclusive.

The barometrical phenomena, being devoid of any striking peculiarities or deviations, we shall omit. The range of this instrument is but slight, and not calculated to shed much light upon the present subject.

The mean temperature for this period we condense into the following Table. The thermometer was Fahrenheit's:

1850.	Sunrise.	Noon.	11 P.M.	Month. Tem.	1851.	Sunrise.	Noon.	11 P.M.	Month. Tem.
Dec.	43·29	54·13	45·39	48·71	Aug.	54·97	69·45	56 06	62·21
1861. Jan.	41·68	56·94	44·90	49·31	Sept.	53·97	69·27	54·20	61·62
Feb.	41·97	60·03	43·64	51·00	Oct.	53.36	70·42	55·45	61·89
Mar.	44 00	63 68	44·84	53·84	Nov.	48·93	63 60	51·90	56·26
April.	48·20	67·27	49·80	57·73	Dec.	46·10	56·55	48·26	51·32
May.	49·58	64 32	50·42	55·95	1852. Jan.	44·61	56·97	49 39	50·79
June.	50·90	66·73	51·80	58·81	1851. An'al.	48·76	64·38	50·2 8	Yearly Tem. 56·57
July.	51·50	64·32	52·10	57·91					

In an examination of the above table, one of the most striking features of the climate will be observed in its equability. The highest monthly temperature for 1851 is shown to be 62·21 (August), the lowest, 49·31 (January), being a difference of only 12·90. The warmest day in the year 1851 was April 28th, the thermometer reaching 84°; on the 19th of October, it reached 83°; on the 18th of August, 82°. The mercury rose to 80° on only nine days in the year, of which six were in October. The lowest temperature of the year was 30°, the highest 84°, the range being 54°. On only twenty-five mornings did the thermometer sink as low as 40°. The warmest month in the year was August, then October, then September; and it will be observed by the table that between the first two of these the difference was less than one degree, while between August, the warmest, and September, the coldest of the three, it is but little more than half a degree. At sunrise at San Francisco, in 1851, the mercury stood at 53° on forty-five mornings, at noon it was 64° during forty-two days. There were one hundred and sixty-one mornings with a temperature varying from 50° to 54°.

The above facts show the great equability of the temperature at San Francisco, and, based as they are upon the observation of one so reliable as Dr. G., form a valuable record for reference. In scarcely any region in the Atlantic States is so great a uniformity observable, so slight a variation between the extremes of heat and cold. Yet are the diurnal depressions of temperature in the afternoon sometimes considerable. In the summer months the early morning is ushered in calm and generally clear, with a bright warm sun. From twelve to one o'clock the winds from the ocean come rushing down the bay, and, bringing with them thick clouds of oceanic vapor, quickly depress the thermometer and completely change the character of the atmosphere. At these times the mercury will suddenly fall from 60° to 65° down to 50°, where it usually remains all night. On the cessation of the winds, in or about October, the weather is again delightfully equable and fine; vegetation springs up under the refreshing influence of the rains which soon succeed, and the hills, throwing off the dry and yellow mantle which a burning sun imposed, smiling in verdure, once more resume the fresh green livery of beauty and loveliness. With remarkable equability of temperature, the weather continues until April, when again the ocean winds renew their sway, and the air is chilled by the vapors which accompany them.

Neither the limits nor the intent of this paper will admit a minute record of the daily or even monthly course of the winds at this point. A few observations will suffice to show their general habitudes, and illustrate what has been already intimated as to their prevalence at certain seasons.

It may be proper to observe that the direction of the coast is N.W. and S.E. nearly, and that, in consequence, winds from the N.W. to S. come from the ocean, those in the opposite direction being land breezes. The observations before us indicate the prevalence of ocean winds for more than three-fourths of the year, a regular increase being observed from January to September. During the interval between these extremes, it would appear that the land winds prevailed only twenty-five and two-thirds days, while the number of days for those from the ocean was one hundred and eighty-six and one-third. During the remainder of the year the predominance of the land winds was only during forty-six days to one hundred and seven from the ocean. The former are generally warm and dry, while the latter, which are usually from the west, are always cool, and loaded with vapors from the ocean. It should be observed that the winds seldom rise before noon, or continue after sunset.

In respect of rain, there cannot be that difference observable between the locality of San Francisco and places in the interior that is noticed in the temperature and the winds, though there the rainy season ordinarily sets in a little earlier and continues later in the year. In the valley of the Sacramento, for example, it would be an unusual occurrence for the rainy season to commence before November, or to continue longer than the month of April, while at San Francisco and on the coast it is not uncommon for them to embrace a larger period of the year. Occasional variations are observed in this respect even in Sacramento. Thus, the 20th of May, 1853, closed the rainy season of that year, while as early as the 15th September, 1853, a slight rain betokened the approaching rule of the storm-king. They are usually accompanied by a wind from a south-easterly direction, and their abatement may at any time be predicted when the current sets in steadily from a northerly or north-westerly point. There exists a very erroneous impression of the character and continuance of the rains of California, especially as to the amount of rain which annually falls. There is indeed no exact uniformity in the annual quantity of rain in this country, yet we believe the number of inches of rain which fall annually in this climate is vastly less than in most, if not all, the States east of the Rocky Mountains. At San Francisco, during the year from April 1st, 1851, to the same date in 1852, there fell 19·84 inches. Admitting this to be a fair average, it exhibits a very great contrast with the amount observed in regions of country on the Atlantic. At Cambridge, Mass., in 1852, the amount of rain was 40·507 inches; at Savannah, Ga., 42·201 inches.

The duration of the rains here is also very variable, as well as their severity in a given period. They seldom last longer in the valley of the Sacramento than forty-eight or sixty hours, often not more than twelve, or even less than this, and exhibit during their continuance a very great irregularity, sometimes coming down in spasmodic showers, now pouring as if the flood-gates of the clouds were opened, and then dispersing, for a time, before the beams of the sun, which break through their misty canopy. A frequent and irregular recurrence of such a series usually makes up the sum of a rainy day or period, after which there is an interval, varying from two or three days to a fortnight, of fine, clear, and delightful weather. Indeed, during the interval thus established between the rainy periods of the season, we have our finest weather. The air is clear and bracing; fresh and invigorating breezes infuse health and elasticity into the frame, and a warm sun, acting upon the moist rich earth, starts into life the dormant energies of the vegetable kingdom.

We have digressed thus far for the purpose of showing some of the peculiar features which characterize the climate of the locality of San Francisco. The observations noted embrace most of the points of interest involved in its history, and it will be seen hereafter in what important particulars the climate differs from some other portions of the State. The influence of the different seasons upon the health of that city, as exhibited in an abstract of the annual mortality, will form a subject for future consideration.

It may not be uninteresting to notice a few of the leading geographical peculiarities of the country out of San Francisco. They may be sketched in few words, and will serve to explain the great differences existing in the climate of different localities, and prove of interest in their bearing upon the diseases which prevail.

Passing over the strip of country near the ocean, which is diversified by rolling hills intersected by rich valleys and plains, a beautiful region of country, unexcelled in fertility, the first range of mountains is the coast range, running at a varying distance from the Pacific, of from thirty to forty miles, and parallel with it. Its elevation is exceedingly variable, rising in the towering peak of Mt. Diablo to a height of more than 3,000 feet above the ocean level. The whole range is but a continuation of the central chain of Lower California, and is finally merged in the Klamet range of Oregon. At its base lie the rich and fertile valleys of the San Joaquin and Sacramento. These valleys, extending east to the foot hills of the Sierra Nevada, constitute one of the finest portions of the State. Stretching from the south in a north-westerly direction for a distance of three or four hundred miles, and watered by the San Joaquin and Sacramento rivers, they are unsurpassed in fertility of soil, in the exuberance of their vegetation, and in their adaptation to the successful pursuit of agriculture, by any portion of the world. Nowhere are the labors of the husbandman more amply repaid, nowhere are to be found the elements for the cultivation of a greater variety of productions, than those furnished by the deep alluvium which covers their surface, and the genial atmosphere which surrounds them. Yet beneath these very elements of prosperity may be sought the source of the principal maladies which exist in this region. Starting into activity under the burning rays of the sun, and wafted alike by the winds which come up from the ocean, and the breezes which flow from the Sierra Nevada, a noxious miasm is exhaled from the decayed and decaying vegetation, which constitutes a fruitful cause of disease among those most exposed to its influence.

The surface of the country in the immediate vicinity of the two principal rivers flowing through these valleys is generally low, and, for miles in extent, in many parts of their course, covered by marshes, or *tulàres*, in which grows in great exuberance a species of bulrush, or *tule*, as it is called, *Scirpus lacustris.* The severe and long-continued rains which fall during the winter season, and the melting snow which pours down from the mountains early in the spring, cause a general overflow of the banks of the rivers, frequently submerging the country for great distances. To the exhalations which arise from the intense action of the sun, during the dry season which so soon succeeds the rains of winter, upon the large deposits of water and upon the vegetable matter spread over and beneath them, may, we believe, be attributed most of the diseases met with in the summer and fall months.

East of these valleys, and at a distance varying from fifty to eighty miles, lie the foot hills of the Sierra Nevada, which raise their huge sides and snow-capped summits along the Eastern boundary of the State. The transition is extreme. In the plains, whose luxuriant fields are spread out at their base, a verdure almost perpetual reigns, and the smiling earth rejoices in the rich and exuberant harvest, or the brilliant display of wild-flowers which lavishly decorate her beneficent bosom. Here the severity of winter is never known; the frosts, which in equal latitudes on the Atlantic side cast gloominess and a blight upon the face of nature, are here but seldom seen, and the autumn and spring glide gradually and imperceptibly, without striking deviation, one into the other. While aloft, on the broad summit of the mountains, in the same latitude, but elevated thousands of feet above, lie unmeasured depths of snow, from year to year accumulating, glittering beneath the bright rays of a summer's sun, in striking contrast with the vegetation which flourishes below. Standing in the centre of the valley of the Sacramento, at midsummer, with the thermometer at 100° in the shade, the eye of the beholder is surprised by the bright columns of snow which sparkle in the distance, high above him, far off on the lofty ridges of the Sierra, or, nearer still, on the highest peaks of the foot hills which fringe their western sides,—the region of eternal frost,—the resting-place of perpetual snow. Between these hills themselves, and the valleys which separate their rolling heights, the extremes of climate are equally striking; there is the same thermometrical difference during the summer months. The heat of the sun, which pours down, unobstructed, upon the deep valleys, is often intense. A sultry atmosphere prevails, the temperature during the morning hours is oppressive, and the miners in the gulches are mostly unable or unwilling to pursue their labors during the heat of the day.

From this rapid and imperfect sketch, some idea may be gained of the general topography of the country,—its geographical features, and the variations existing between different portions in respect of temperature and elevation. The data upon which to base a history of the climate of different portions of the State, and its relation to disease, are extremely defective. Statistical facts are wanting, or incomplete, and necessity compels us, in many instances, to rely upon the general facts which come to us in an authentic form, and upon personal observation. Out of San Francisco, the most interesting portion of the State, which can form the subject of an investigation of this nature, is the valley of the Sacramento. Whether considered in the view of its population, its position, its agricultural and commercial importance, or the attractive features with which the prodigal hand of nature has enriched it, no other portion of the State is so well entitled to careful consideration. If to these we add the character of its diseases, we may find, in examining some of their more prominent causes, and their mortality, a large and interesting field for contemplation.

A general description of the location of this valley has been already given, particularly of that portion in the immediate vicinity of the Sacramento river. But it would be erroneous to suppose that the whole of the valley is ever subject to overflow, or in any way affected by the annual rise of water in the river. In by far the greatest portion, the land is high, and at all seasons dry. Beyond a mile or two of the river, there is a large extent of country whose broad plains are unaffected by the rains of winter, and where no marshes or standing bodies of water are to be seen. The principal low grounds are on or near the banks of the Sacramento, and in the broad *tuláres*, which extend, in some places, for several miles in extent, and whose waters are emptied into the river. During the summer season, they are most of them dry and passable, but, filled by the rains of winter, and the overflowing of the swollen rivers, they are for the greater part of the year covered with water. Thus supplied from the rivers, they become the receptacle of large deposits of vegetable matter, which, swept down the current, lodge among the rushes, and, on the subsidence of the waters, form, together with the decayed products of their own soil, an abundant source of miasmatic exhalation. Along the immediate vicinity of these sources of malaria, its effects are distinctly seen in the diseases which prevail,—the intermittents and remittents, and their sequels, which affect those residing within the sphere of its influence. This influence appears, in most instances, to be strictly local, or to extend, at least, but little beyond its original seat. The healthful atmosphere which prevails beyond, and in the higher portions of the valley, is fully attested by the almost entire immunity of the inhabitants from disease of any kind. Indeed, there is no part of California more salubrious than many portions of this valley. Nowhere is the annual mortality, in proportion to the inhabitants, less; nowhere is there a purer, more invigorating, health-giving atmosphere. This fact may be fully shown by statistical records of mortality, and is apparent in the unmistakable evidences exhibited by the population.

Surprise has often been expressed by residents of this valley, and especially by those in the immediate neighborhood of the river, at the apparently slight increase of disease which sometimes succeeds its overflow, after a rainy season of unusual severity. So true is this, that it constitutes one of the most striking features of the climate, and has frequently been the occasion of a doubt, or even of absolute denial of the influence of the floods on the health of the country, or of the presence of malaria in the emanations which arise from them. It is indeed difficult to account for the remarkable exemption occasionally observed under circumstances which, by all the processes of reasoning commonly adopted in prognosticating the chances of disease, would seem to indicate, with the unerring certainty of cause and effect, its alarming increase. What influence the prevailing winds, or the early subsidence of the inundations, and the consequent drying of the soil before the sun of summer has attained its greatest intensity, may have upon the solution of this question, is yet the subject of a theoretical opinion merely, and, perhaps, not perfectly substantiated by the limited array of facts which can at present be made available in its discussion. In the lower situations bordering upon the river, the manifestations of malaria are abundant. Yet, in Sacramento, in the winter of '51 and '52, and again in '52 and '53, although a portion of the city was, until late in the season, covered with water, there was no such alarming augmentation of those peculiar diseases usually supposed to be of malarious origin as was universally predicted. In any other country in the world, situated in a temperate latitude, subject to the like apparent causes of disease, the population would have been inundated and overwhelmed by the severity and universality of the pestilential influences.

We do not consider; at this time, or in this connection, the cholera, which made its appearance in this city in the summer of '52. Its dependence upon marsh miasm is rendered more than improbable by the recorded history of the disease, and its progress under all circumstances of climate, locality, and season, as well as under all recognized atmospherical conditions. That this want of connection between the inundations to which this city has occasionally been subjected, and the subsequent presence of cholera, is frequently lost sight of, is clear, and will satisfactorily account for the erroneous impressions entertained by many unacquainted with the medical history of the valley, as to the healthiness of the climate. In the fall of 1850, the cholera raged here with fourfold the violence of that in '52, and yet it was preceded, not only by no flood, but by a winter of unusual dryness.

Yet, to certain portions of the valley, subject to overflow, and in which there is a large extent of low and wet ground during a greater portion of the year, these remarks do not apply. In these, the continued presence of water in the marshes during the summer, and the generation in them of malarious miasm, are intimately associated, and the results are too plainly evinced in the frequent occurrence of the more active forms of periodical disease during the autumnal months. Following the course of the river towards the N.W., for nearly one hundred miles, we find at Colusi, for example, a marked difference in this respect from what is observed at Sacramento, which may be considered, practically, to occupy a central position between the former place, and the affluence of the river into Suisun bay. Situated in a rich alluvial district, in the immediate neighborhood of extensive marshes, which are covered for a long period of the year with water, the recurrence of each autumnal season is marked by the almost universal prevalence of periodical diseases and their congeners. Intermittents and remittents often assume their most malignant forms, and their remote effects are seen in the organic congestions, the visceral enlargements, and the dropsical effusions which ensue. The winds which prevail during the summer, as we are informed, are usually from the N.W., warm and dry; its remoteness from the bay secludes it from the cooling influence of the southerly winds, which, at Sacramento, are so grateful during the evening; the days are extremely hot, and though the mercury falls towards evening, the difference observed between the temperature during the day and night, so refreshing nearer the ocean, is much less prominent.

There is no portion of this valley, studied with reference to the diseases annually prevailing, of greater interest than Sacramento. In population the second city in the State, located in one of the richest valleys, the business mart of the vast extent of country in the interior, and the central rendezvous for the influx of immigration which annually pours in from the plains, or is brought to our shores by the ocean steamers, it is invested with an importance which is exceeded by no other city or region in California. In a medical point of view this interest is maintained by its local features and the diseases which prevail.

The general characters of the locality of the city have been already referred to in the preceding pages. Its situation is on the eastern side of the Sacramento river, whose banks for miles north and south (or rather N.W. and S.E.) of the city are low, and subject to occasional inundation from the rivers and the melting snow from the mountains. The water, thus spread over the adjoining country and in the *tulàres*, remains upon the surface for some time after the subsidence of the river itself, and the surrounding lands being lower than the river banks, its dissipation is left to the gradual processes of evaporation and interstitial exudation. Such is the character of the land immediately south and north of the city. On the east it is generally higher, and extends in wide plains, with varying elevation, interspersed with occasional meadow lands, to the foot hills on its further boundary. The elevation of the city above the sea is, according to an observation which has been shown us, about twenty feet, its latitude 38° 34′ 40″, its longitude 121° 48′ 11″. The permanent population of the city is from ten to twelve thousand.

The climate of Sacramento, in many respects, excels that of any other portion of California. Exempt from the extremes of heat and cold which are observed in other portions of the State, the seasons here are remarkable for their equability and uniformity, gliding gradually one into the other, without abruptness, and without those sudden changes often so marked in the Atlantic portion of America. Compared with each other, the temperature of different years is remarkably uniform. Contrasting the seasons themselves in any one year, the greatest thermometrical deviation will be observed during the summer months, between the periods of sunrise and noon, and between noon and a late hour of the night. Indeed, one of the most striking features of our summer climate is seen in the descent of the mercury a few hours after sunset. In the latter part of the afternoon, or towards evening, a brisk southerly breeze usually sets in from the ocean, rapidly replacing the atmosphere which an almost vertical sun has rarefied during the day. Even at a time when the temperature of mid-day is indicated by from 95° to 100° Fah., the evening sets in delightfully cool and pleasant; the heat which the earth has absorbed is rapidly radiated into space; the mercury falls to about 60° or 65°, and the heated frame, languishing under the intensity of the sun, is cooled and invigorated by the genial current, which, "like a breathing from another world," brings joy on its wings. These winds, or rather breezes, present a strong contrast with the cold, chilling blasts which visit San Francisco at this season, at or near mid-day, and which, being attended by heavy mists from the ocean, occasion a change in the atmosphere by no means agreeable. Here they seldom rise high, and though accompanied with a marked alteration in the atmospherical heat, the change is not abrupt, nor more than sufficient to impart timely vigor to the energies of a population relaxed by the exalted temperature of the preceding day. Sufficient has already been said of the general character of the annual rains, to convey some idea of their leading features. In their prominent characteristics, they do not differ from the account given of them as pertaining to the vicinity of San Francisco.

In this valley they usually commence a little later in the year, say the last of October or first of November, and continue with irregular periods of duration and intermission until April. Sometimes there are occasional showers in October, and not unfrequently they begin upon the receding days of April. Their approach is always preceded for some time by an increased hygrometric condition of the atmosphere, with southerly winds; and on each recurrence during the season, these winds, though not unerring prognostics, become their most reliable and undeviating heralds.

In the interval between the rains, the weather is cool and pleasant, a fresh northerly wind from the "snowy mountains" diffuses health and an invigorating influence among the inhabitants, and a warm and grateful sun awakes from their slumbers the torpid germs of the vegetable world. In February, the wild oats have covered the fields with a rich mantle of green, and the violet mingles its odors with the balmy breath of March. Close upon the termination of the rainy season the summer begins. The sun at mid-day rapidly attains an almost tropical intensity. The north wind, which before was cool and refreshing, comes to us warm and sultry, while the south wind of evening, "like a gentle friend," renews his welcome visitations.

Materials are not at hand for the construction of statistical tables, showing the changes in respect of temperature during any very considerable period. This is the more to be regretted, as we conceive they would fully establish the positions assumed in the preceding pages. I have, however, been kindly furnished by my partner, Dr. J. F. Morse, with a statistical record for a portion of the year 1852, which suffices to show the thermometrical range and the course of the winds during the period they embrace, and which may be considered a fair criterion by which to construct an estimate for a series of years. The only noticeable difference is in the greater prevalence of southerly winds during the whole day than has at other times been observed.

The following are the Tables alluded to; the first relates to the thermometrical changes, and the last to the course, &c., of winds.

Tables showing the thermometrical range and direction of the winds from July 18*th to Oct.* 30*th, inclusive.*

JULY.	Max.	Min.	Range	AUGUST.	Max.	Min.	Range.
Sunrise.	80	68	12	Sunrise.	72	66	7
3 P.M.	92	79	13	3 P.M.	91	70	21
Sunset.	88	74	14	Sunset.	87	70	17

SEPT.	Max.	Min.	Range.	OCT.	Max.	Min.	Range.
Sunrise.	78	60	18	Sunrise.	67	56	11
3 P.M.	96	67	29	3 P.M.	79	64	15
Sunset.	92	70	22	Sunset.	76	61	15

It is to be regretted that the indications of the thermometer were not given at a later hour in the evening than sunset, inasmuch as the change in temperature is much greater after that hour than between that and 3 P.M. As far as our own observations extend, the height of the mercury is remarkably near the same standard at sunrise, and 10 or 11 o'clock, P.M.

According to these tables, we find the hottest day in the four months, at 3 P.M., was Sept. 11th—96°; next, Sept. 10th and July 24th—92°. The hottest day at sunset was Sept. 11th—92°; next, July 23d and 29th—88°. The coolest day at 3 P.M. was Oct. 14th—79°. The highest monthly range between sunrise and sunset was 10°, in August; the lowest 2° in July. The greatest range during the four months was in Sept.—29°. The mean range for the whole period was 16° 16′.

On the subject of the winds, the observations furnished by Doct. M. substantiate the general remarks above expressed. From these we have arranged a general statement as follows, viz.:

JULY.

Sunrise—Wind S.S.E., E.S.E., or S.W., every day but one.
3 P.M. " S., or S.E., " " " five.
Sunset— " S., E.S.E. or S.W., every day in the month.

AUGUST.

Sunrise—Wind S., E.S.E. or S.W., every day except four.
3 P.M. " S., S.S.E., E.S.E., S.E., or S.W., " five.
Sunset— from some southerly point every day.

SEPTEMBER.

Sunrise—Wind S., S.E., or S.W., every day except nine.
3 P.M. " " " " " " " thirteen.
Sunset " " " " " " " five.

OCTOBER.

Sunrise—Wind S., S.S.E., or S.W., every day except nine.
3 P.M. " " " S.S.W. or S.W. " " " eight.
Sunset— " " " S.E., " " " " " "

During July, August, and October, the wind was northerly on no day during the evening, and in September only one evening. When not southerly it was from the west. It will be observed how uniform the southerly winds prevailed during the evening, and an explanation will be afforded thereby, of the delightfully cool and refreshing atmosphere of that period of the day. As before mentioned, the prevalence of southerly winds during other portions of the day was greater than is usual. In the succeeding summer, the northerly winds were more predominant during the day.

The influence of these winds upon the health of the city we do not regard as a matter requiring a lengthy discussion. At most, it would appear, from all the evidence before us, to be slight. The occasionally injurious effects of the great deviation of temperature noticed between day and night, the checking of the perspiration which ensues, and the consequences resulting from it, have been previously alluded to. Beyond this, their agency in disease is not remarkable.

With these somewhat cursory observations, we shall briefly allude to a few of the diseases most frequently met with on the Sacramento river, and it will readily be understood that, of these, intermittent and remittent fevers constitute a large proportion. Of the two varieties, intermittents largely predominate. In addition, many cases are reported as typhoid fever, some of which are the true petechial typhoid, and others only, such as, originally of a different type, have assumed that form in their progress towards their termination. It will also be seen, that there is no class of diseases more prevalent than those whose seat is in the mucous membranes, particularly that of the large intestines. Of all the maladies which the physician is called upon to treat, there are none more common than those whose primary seat is found in some portion of the intestinal mucous membrane, nor is there any complication of other affections more frequent, and towards which his watchful attention is more earnestly directed. Indeed, few persons come to California, and more especially to the valleys and to the neighborhood of the rivers, without being more or less affected, during their early residence, with diarrhœa. In this city, it is frequently attributed to the use of the river water, by those unaccustomed to it; and though this may possibly be one of its occasional causes, yet it should, with stricter propriety, be ascribed to the universal pre-disposition conferred by the climate to disorder,—to irritation,—hyperæmia of the lining membrane of the intestinal canal and its follicles. The prevalence of these affections in warm countries, induced by the action of the hot sun on the dermoid tissue, has been long noticed, and this cause, with the chilliness of the nights, and perhaps, also, an atmosphere vitiated by malarious emanations, probably furnishes a sufficient explanation. In its associations, it frequently attends the commencement of fever, especially of the ordinary intermittents of the autumnal months, of dysentery, and every stage of remittents. As a primary disease, its character, in the great majority of cases, is mild and tractable.

It is not our intention to enter into a minute account of this or the other diseases commonly met with. A very few words will be devoted to the subject.

According to our own experience, the accession of this complaint is usually attended with more or less derangement of the biliary secretion, the discharges being sometimes highly charged with bile, or, much more frequently, during the latter part of the season, entirely devoid of this principle. They are commonly frequent, thin, and serous, sometimes mucous, and, in the vast majority of cases, unattended with tormina or pain. The tongue is seldom loaded, usually clean, and more or less red. It the latter part of the season, and in cases of severity, it is often pale and œdematous, or dry and discolored, accompanied with a marked torpidity of the cutaneous secreting vessels, a languid circulation, and the general evidences of extreme debility. The treatment is, of course, modified by the peculiar characters presented, and the stage of the disorder, but consists mainly in the administration of alteratives, opiates, and tonics, combined, if needed, by the more active astringents. A combination of blue mass, morphia, and quinia, will frequently accomplish all the purposes in view. While, in many cases, occurring in debilitated habits, the addition of piperine to the first two of these has seemed to be attended with beneficial effects. The chronic stages of the disease are often extremely obstinate and difficult to relieve. For this condition, a host of expedients may be tried, comprised mostly under the indications already mentioned: a change of air—a temporary removal to the mountains in the interior, or to a marine atmosphere, will here often effect more lasting relief than all the appliances of the materia medica.

The type of the fevers most commonly met with is intermittent, of every variety of feature, but neither these, nor the remittents, present any peculiar characteristics which require special attention in this place. The general principles of their treatment are common to this and other countries, except, indeed, in so far as depends upon the prevailing element of irritation of the intestinal mucous membrane. Attention should constantly be directed to this important feature, and due respect paid to its earliest manifestations. Their frequent complication with cerebral symptoms is promptly and effectively relieved by the timely use of cupping. In our own experience, the long-continued use of mercurials is seldom needed, and ptyalism never. A few initiatory doses as an alterative, or purgative, will fulfil all the indications to which they are applicable, and the subsequent issue of the case may, in most instances, be left to the administration of diaphoretics, quinia, and, if required, to stimulants. Many modifications of this practice will, in different cases, be required, which the judgment of the physician, at the moment, can alone determine.

In concluding this portion of the subject, we will simply add, that the prevalence of diarrhœa and dysentery, in this climate, seems to strengthen the opinion entertained by many, of the connection of these diseases with malarious vitiation of the atmosphere, and tends to confirm the remark of Doct. Forry, that, "compared with the ratios of intermitting and remitting fever, the laws developed in both exhibit a striking analogy." The augmentation of both with the increasing temperature of the season is very evident. Besides these, rheumatic affections are frequently met with, as well also as ophthalmiae, of different characters, but very often, according to our own observation, associated with a rheumatic taint, and implicating the iris in the progress of the inflammation. Of minor affections, there are none more common than the various diseases of the skin,—impetiginous and lichenous,—also, urticaria; erysipelas, too, has been of frequent occurrence in this country, sometimes, in certain localities, assuming an epidemic form. Its progress is rapid, and it has, at times, been marked by great severity. In the State Marine Hospital at San Francisco, 21 cases were reported for the year ending Dec. 31, '53; and in the Stockton Hospital, for the year ending Dec. 31, '52, 10 cases. In this year, it is stated to have prevailed throughout the southern mining counties, with "great virulence and alarming fatality."

For the purpose of more clearly setting forth the relation of the climate to disease, and of facilitating a proper understanding of the subject, we have prepared a series of Tables, an examination of which will not be without interest. It is here proper to state, that the facilities in our possession for the accurate investigation of this important subject, are extremely defective. The information we have been enabled to obtain, has been through the kindness of Mr. Yeomans, the undertaker in this city. Having held this position for a series of years, and being necessarily engaged in the burial of all persons dying within the city, a record of whom he has constantly kept, whether from the public hospitals or from private circles; the information, thus far, is probably correct. But in the absence of any law requiring the certificate of a physician stating the cause of death, he must necessarily incur the hazard of an occasional error. Under these circumstances, much credit is due to Mr. Yeomans for the unrewarded care bestowed in ascertaining the true causes of death, and the general apparent accuracy with which his registry has been kept. When the probable cause could not satisfactorily be arrived at, he has classed them under the head of "unknown." With this explanation, we believe the statistical collections we have made, will, with one exception hereafter to be mentioned, present a near approximation to the truth. The same explanatory statement will equally apply to the records obtained at San Francisco.

The first of these Tables embraces a full record of the interments in Sacramento for the years 1851, '52 and '53.

Table of Mortality during three Years.

	1851.	1852.	1853.		1851.	1852.	1853.
Diarrhœa		84	46	Still-born,			3
and	60			Abdominal Abscess,	1	1	
Dysentery,		31	16	Ulceration of Bowels,	2		
Fevers,	59	140	63	Jaundice,	1		5
Phthisis,	19	27	22	Croup,		1	
Erysipelas,	15	1	1	Dentition,		1	6
Pneumonia,	13			Cystitis,			1
Dropsy,	7	13	9	Cancrum Oris,			1
Enteritis,	6	19	16	Parturition,			1
Mania a Potu,	5			Convulsions,	1		3
Infl. and Con. of Brain,	9	27	12	Wounds & Accidents,	9	19	7
Hydrothorax,	4			Drowned,	8	11	11
Disease of the Heart,	2	2	4	Executed,	4		3
Bronchitis,	2	9		Poisoned,	1		
Ptyalism,		1		Unknown,	29	58	27
Worms,		1		Diseased Lungs,		11	17
Disease of Kidneys,			1	Smallpox,		19	16
Bilious Colic,			1	Epilepsy,		1	1
Rheumatism,	3			Rubeola,		3	
Liver Complaint,	1	3	5	Paralysis,		1	
Intem. and Exposure,	1	15	8	Hip-joint Disease,		1	
Gastritis,	1			White Swelling,		1	
Debility,	1	7	9	Cholera Morbus,		15	
Tonsilitis,	1			Cholera,		102	
Scorbutus,	1	2	1	Burned,		6	
Spinal Disease,	1			Suicide,		8	1
Pertussis,	1			Fungus Hematodes,			1
Influenza,	1			Cholera Infantum,			1
Pleuritis,	1			Murder,			4

Ages for 1852 *and* 1853.

	1852.	1853.		1852.	1853.
Under 1 Year,	17	18	From 30 to 40,	126	70
From 1 to 5,	32	23	" 40 " 50,	79	43
" 5 " 10,	8	4	50 and over,	40	24
" 10 " 20,	21	15	Unknown,	106	49
" 20 " 30,	214	87	Total.	643	333

The whole mortality, as shown by the above, was 1,251. Of these, however, a considerable number cannot be ascribed to the influence of any local causes, and of such, there will be observed the large proportion of 125 arising from intemperance and exposure, murder, executions, and sundry accidents. Besides these quite a large number were of diseases of a purely accidental character, or such as depended upon organic alterations begun in other climates. It is to be remembered that Sacramento is the general rendezvous for the tide of immigration which pours in from the Atlantic States. Whether from the plains or from the ocean steamers, the great mass of adventurers to the land of golden promise repair to this city, bringing with them the seeds of diseases acquired on their route hither, or implanted before leaving home. Destitute, in many instances, of the means necessary for subsistence merely, and unprovided for the emergency of sickness, too many, alas! are thrown upon the cold charity of strangers, and with blasted hopes and an untimely death, help to swell up the lists of mortality.

The estimate here made includes, also, the deaths occurring in the State Hospital, which, during '51 and '52, was located in this city, and thus embraces a large aggregate of cases not properly belonging to the city, and who had contracted their diseases in other portions of the State. The total mortality at this institution, as taken from the books of the undertaker, was two hundred and one, and in 1853, from January to June 30th, when the Hospital closed, it was thirty-nine.

During '53, there died also at the County Hospital, from June 30th to September 1st, five persons; making forty-four to be deducted from the proper city mortality during eight months, and a total aggregate of two hundred and forty-five from the whole mortality of the city from January '52 to September 1st, 1853.

With these considerations kept in view, an examination of this Table furnishes the most convincing evidence of the general salubrity of the climate of Sacramento. When we consider the character of the population, the disregard of all sanitary requisitions among a large class of the community, the dissipation, the apparent contempt for the restraints which a due regard to health imposes, and more than all, the flood of immigration annually centering here, and the wretched condition to which so many of them are reduced, the wonder is, that the annual mortality is not vastly greater than that shown by the record.

The statement of the ages of the deceased during 1852 and '53, is worthy of notice. The large number, between twenty and forty years of age, sufficiently shows the general character of our population, and admits the influence of the youthful vigor and energy which distinguish it.

In comparison with other diseases not strictly ascribable to the climate, the proportion of deaths from disease of the brain is large. Under the heads of inflammation and congestion of this organ and apoplexy, we find that fifty-four are referable to cerebral affections. A ready explanation is offered in the moral causes which are so prevalent in this country. Among these, disappointed hopes, blighted expectations, and pride smarting under the contemplation of golden dreams unrealized, or fortunes acquired, but suddenly vanishing in the vortex of speculation or of gaming, are in ever active operation, powerfully predisposing and exciting both of functional and organic derangements of the brain.

An analysis of the Table would afford an interesting opportunity for a comparison of the record of deaths in this city, with those of other cities on the Atlantic side of North

America. The whole mortality from acute diseases of the chest and respiratory organs, for example, including pneumonia, pleuritis, bronchitis, influenza, and croup, is only twenty-seven. On the other hand, under the head of consumption and diseased lungs, which are supposed to refer to the same disease, we find the comparatively large number of ninety-six.

The relation of the climate of this valley to phthisis is a question, upon the discussion of which we have neither space to enter, nor the materials at hand upon which satisfactorily to construct an argument. The country has but so recently been occupied by its present population, and this is so fluctuating, that statistical records upon this subject are entirely wanting. Certain it is, however, that few of the cases of consumptive disease, hitherto met with in the valley, have originated here. In most, if not all the instances, the disease has been implanted before reaching the country, and the most that can be said, is that it has not been benefited by the change. Our own opinion is that the climate is not a favorable one for the residence of those in whom the manifestations of the disease have appeared. The prevailing constitution of the atmosphere is malarious, and the debilitating influence of this poison upon the vigor of those exposed to its operation, and upon their power of resisting the inroads of this disease, has been simply tested by the experience of the best observers. Moreover, the sudden atmospheric change which occurs in the evening, and the bronchial irritation which is liable to ensue upon the too speedy checking of the cutaneous secretions are not to be lost sight of in this connection.

In the succeeding Table is a statement showing the monthly mortality from all diseases during '52 and '53 :

Table of Monthly Mortality.

	1852.	1853.		1852.	1853.
January,	22	42	July,	46	14
February,	21	29	August,	76	23
March,	24	21	September,	185	29
April,	18	29	October	79	37
May,	20	20	November,	78	31
June,	30	18	December,	44	40
Total 6 ms.	135	159	Total 6 ms.	408	174

It will be seen that in both the years referred to, the mortality was greatest in the last half of the year, viz., from July to December inclusive. In 1853, the excess of the last half over the first was only 85·12, nearly; while in '52 it was equal to three times the whole number of deaths in the same period. This discrepancy in the monthly mortality in the two years is more apparent than real, if we take into account only those diseases which can justly be attributed to the permanent influence of the climate. If from the deaths in the latter half of 1852, we deduct those from cholera and cholera morbus, which were probably the same disease, and none of which are stated to have occurred in '53, and which cannot properly be considered to belong to the ordinary agency of the climate, and at the same time make a proper allowance for the large increase of diarrhœa in that year, which was to be ascribed to the prevailing choleraic influence, the proportion of deaths is but little greater in one year than in the other, only 34. If in addition, we take into account the large increase of deaths classed as "unknown" in that year, the persons, so classified, having been many of them found dead, picked up in the sheds and bushes on the outskirts of the city, and some of whom we have reason to know died of cholera, and also the small, though still frightful, list of those who fell victims to the relentless fire which swept over our city in

November, and classed in the Table as "burned," the uniformity in the mortality of the two years is remarkable.

In computing the pro-rata mortality of the city, a very large allowance is to be made for the floating population constantly present within its precincts. This cannot be less than 3,000 or 4,000, and, if considered in the calculation, must considerably reduce the estimate. It is a fact, universally admitted, we believe, that the actual population of this city,—permanent and transient—has not varied to any very considerable extent, for the last three years. The permanent inhabitants are, probably, more numerous now than at any previous time, but the difference is fully equalized by the greater floating population in '51 and '52. Admitting then the whole population to have been 13,000, the mortality in 1851 was one in 47·27, nearly; in 1852, including cholera and its associates, one in 20·46; in 1853, one in 33·61.

But from this estimate, the mortality from cholera should, according to the view above expressed, be deducted, in judging of the mortality from diseases connected with the climate in its permanent influence, which will reduce the ratio to a nearer equality for the three years.

The third Table which we have prepared, is intended to show the mortality in two years, from the two principal diseases of this locality, viz., fevers and affections of the bowels. The last half of the year is selected, as at that period, these complaints are ordinarily more prevalent than at any other, and the year 1852 is purposely omitted, in consequence of the acknowledged incorrectness of the report, as will be explained. It is thus shown, that the greatest difference was in 1851, while in 1853 it amounted to two only.

	1851.	1853.	1853.	1851.		1851.	1853.	1853.	1851.
	Fevers.		Diar. & Dys.			Fevers.		Diar. & Dys.	
July,	4	3	3	1	November,	9	6	8	5
August,	2	2	1	1	December,	11	7	11	8
September,	5	9	7	5					
October,	5	10	5	3	Total in 6 m's,	36	37	35	23

With reference to the reported cases of fever in 1852, a word is necessary in explanation. The number reported was so large, as with the general information we possessed, could scarcely be credited. With the hope of obtaining a solution of the question, we made particular inquiries of Mr. Yeomans, and learned from him, what was before suspected, that a good many of the cases of cholera were in the early period of its prevalence, reported to him, by the attending physicians, as congestive fever. This was done partly with the view of quelling the excited state of the public mind on the subject of cholera, and partly under the theoretical persuasion of the identity of the two diseases. Still, with this admission, the real number of deaths by fever, in that year, exceeded those of either of the other years with which they are associated in the first of the tables.

The small excess of fevers over the diseases with which they have just been contrasted, will appear remarkable when it is considered that there was an extensive inundation in the spring of '53, and the fact goes far to confirm the impression of the slight influence exerted by the floods upon the health of the city.

Upon this subject we shall not, at present, attempt an explanation, awaiting the further collection of statistical facts and the developments of the future. However it may be viewed, the facts which have been presented, and which, we believe, are mainly authentic, demonstrate, in the clearest possible manner, the almost unequalled salubrity of our climate. A careful examination of all the statistical records, —regard being had to the modifying circumstances we have mentioned,—the accidental deaths, and those in no way connected with the locality,—fully and unequivocally establish the proposition of the healthful influence of the climatic elements which prevail.

The cases set down as fever it would be interesting to classify according to their type, as well as their comparative prevalence in particular months; but the record is here greatly defective, rendering it impossible to do more than arrive at an approximation to the truth. Intermittents and remittents are those most commonly met with, of which the greatest mortality in '53, was in September, 7 cases; next October, 6 cases. Of typhoid fever, there are reported four cases in October, the same number in December, two in September, and one in August.

The same remark is applicable to any attempt accurately to classify, according to their monthly mortality, the two diseases, diarrhœa and dysentery. From a careful examination of the reported cases, according to the record of the undertaker, we find that the greatest monthly mortality from dysentery in 1853, was four, in September; while the highest report of diarrhœa in that year was twelve, in December; next January, eleven cases; and the lowest was in June, when there was but one death reported from this disease. The prevalence of cholera in '52 of course caused a very large increase in the mortality of diarrhœa over the other, yet experience positively indicates the preponderance of the former at all times.

The whole mortality in the city during the present year, 1854, from Jan. to March 30th, has been seventy-three. Of these there occurred in Jan. thirty-eight; Feb. seventeen; March (29 days), twenty-one. Eight cases were of fever; six of diarrhœa and dysentery; three of disease of the brain; twenty-one of diseases of the lungs—not clearly specified; three of variola; two of dropsy; six of enteritis; and the remainder of various accidental causes.

The following table is intended to exhibit the mortality of this city as compared with San Francisco, during the last year, 1853.

Sacramento.	1853.	1853.	San Fr'ncisco	Sacramento.	1853.	1853.	San Fr'ncisco
January,	43	133	January.	August,	21	100	August.
February,	29	130	February.	Sept.	28	135	Sept.
March,	21	93	March.	October,	37	105	October.
April,	28	84	April.	Nov.	32	129	Nov.
May,	20	99	May.	Dec.	41	100	Dec.
June,	18	120	June.	Total,	333	1343	Total.
July,	15	115	July.				

The whole mortality of San Francisco, during three and a half years, was as follows:

From July, 1850 to July, '51, - - - - - -	1,475
" " '51 " '52, - - - - - -	1,005
" " '53 " '53, - - - - - -	1,575
" " '53 January, '54 (6 months) - -	620
Total mortality in 3½ years - - - - -	4,675

In judging of the salubrity of this city, however, a large deduction from the above must be made for those who have gone there with the germs of disease already implanted in the system. Many from neighboring counties, or even from the mines, are annually carried there for the purpose of securing the benefits of hospital treatment and care. Large numbers of immigrants to the country by way of the ocean, also arrive, suffering under maladies contracted on the Isthmus or on shipboard, and, dying in the city, add to the sum of the mortality. If we make due allowance for these, and for those who meet death by accident, and consider the difference in population, which is probably three times larger than that of Sacramento, the contrast in mortality is slighter than would at first appear. Still, making every admission for these modifying circumstances, the comparison seems to show a large percentage in favor of the healthfulness of Sacramento. This latter, as already remarked, is the general resort for the great mass of adventurers coming to California. By whatever route they may have travelled, a very large majority first seek this city as a convenient locality for the perfection of their future plans, and for a mature survey of the prospects before them. This qualifying element in estimating the salubrity of the climate, as well as the remarks relative to hospital patients, applies, therefore, with equal force, to the latter, and reduces the actual climatic diseases much below the amount stated in the records we have consulted.

We derive the following information from the report of the Trustees of the State Marine Hospital to the Legislature.

The whole number of patients admitted in 1852 was

2,283; of these, 1,898 were received on account of the city of San Francisco, and 51 were "pay patients"; these should also be considered as properly citizens. Of the whole number, there died 368; and of these, 296 belonged to the two latter classes of patients. Of the diseases, 52 were of continued, 41 of typhoid, 19 of remittent, 3 of intermittent fever, 45 of cholera, 3 of cholera morbus, 42 of diarrhœa, 34 of dysentery, 10 of phthisis, 11 of pneumonia, 7 of pleuritis; being 264, or nearly 5-8 of the whole. The remainder are classed under the head of "wounds" and sundry occasional diseases.

The comparative monthly mortality of the two cities presents a striking contrast. July, which, in 1853, appears to have been the healthiest month in the year in Sacramento, and which shows a mortality of only 15, exhibits in San Francisco an aggregate of 115 deaths, or nearly eight times as many; June, 6·66 as many; May, five times, and so on; while the fall and winter months, which are the most unhealthy in Sacramento, compare favorably with the same period in San Francisco, after making all proper allowances for the difference in population. The mean monthly mortality for Sacramento is 27·75, and 111·92 in San Francisco.

The limits of this paper preclude the possibility of entering into the diseases and climate of any very extensive portion of the State. Yet we cannot omit to add a few observations concerning the locality of Stockton. This, which is one of the principal cities in the State, is situated in the valley of the San Joaquin, on a slough connecting with the San Joaquin river. As before observed, this valley may be considered, practically, as one with the Sacramento. Their general geographical features are similar, the *lule* lands are abundant, and the existing causes of disease are not unlike. The climate is mild and equable, and during the summer season, from its more secluded position, the atmospheric heat is somewhat greater. According to the report of the physician to the State Hospital located there, the variations of the thermometer are slight. It is stated that the coldest morning in the year (1853) was December 31st, thermometer 28°; the coldest noon, Dec. 26th, thermometer 43°; the coldest night, Dec. 25th, thermometer 34°; the warmest morning was June 16th, thermometer 83°; the warmest noon, June 16, thermometer 100°; the warmest evening, June 15, thermometer 83°. The prevailing winds during the dry season are N.W.; during the rainy season, southerly.

The whole number admitted into the Hospital from Aug. 7th, 1851, to July 1, 1853, was 1,870, of whom only 87 are stated to have died. Of the whole number admitted, 515 were sick of fever, viz.: intermittent, 284; remittent, 90; continued, 15; congestive, 6; typhoid, 80; Panama, 40;—of whom 20 died. One hundred and forty-nine were cases of dysentery and diarrhœa, in the proportion of 86 of the former to 63 of the latter. Of diseases of the chest, there were 10 of bronchitis; 40 of pneumonia; 10 of pleuritis; 1 of gangrene of lungs; 5 of asthma; 11 of phthisis; 7 of influenza. Rheumatism of various kinds numbered 52 cases; ophthalmia, 20; hepatitis, 16; cholera and cholera morbus, 49; skin, diseases of, 40; venereal affections, 172; the remainder comprising a few cases of various incidental affections. It is remarked that there are no cases which the physician is called upon to treat, as unpleasant and unmanageable as the chronic diarrhœas and dysenteries which present themselves. The resemblance of disease in the two valleys is so striking, that it is unnecessary to repeat what has been before said when considering the valley of the Sacramento.

It would be interesting to subject to analysis the report of the physician to the Insane Asylum at Stockton, and examine the details of a malady whose inroads in this State have been fearfully, frightfully manifested,—whose march during the last four years has been, not " aequo pede," but in a quadruplicate ratio. What a field for serious contemplation is here opened! What a commentary it suggests upon the moral influences which affect the population! How violent the passions, wrestling with disappointment and despair! How terrible the struggle which destroys the balance and desolates the integrity of mind!

The whole number of patients admitted from May 14, 1852, to Dec. 31, 1853, was 284. In no State in the Union are the incentives to this disease more prevalent; nowhere are its exciting causes more actively displayed. The thirst for wealth,—the strife for power,—the intricacies and perplexities of speculation,—the wounds, the secret struggles of pride,—the capriciousness of fortune,—the constant excitement, the feverish tension of the intellect they occasion, and, last of all, and with the crumbling overthrow of all, the agonies of despair,—these are but the outlines of that picture in whose finely-wrought lineaments are to be traced the potent causes of insanity existing in this State. But we cannot pursue this subject in its interesting details. It is one which in itself embraces a wider compass than our limits allow.

We have thus hastily, and with the feeble aids in our possession, imperfectly sketched some of the more striking features of the climate of a portion of California,—a limited portion indeed, yet one in which, by its geographical position, its commercial and agricultural importance, and as the locality of its largest cities, there seemed to centre the greatest interest. It is a source of sincere regret that the statistical information could not have been more extensive, and embrace a wider range of topics, as well as of territory, and especially that the means of obtaining such information should in any respect be involved in doubt. In their collection, we have endeavored to separate the uncertain from the true, and wherever the circumstances were such as to involve a want of precision, we have sufficiently expressed it. In the main, we believe they will be found to convey a pretty correct estimate of the actual sanatary condition of those portions of the State they are intended to embrace. A consideration of the climate of other parts of the country, and especially of the mining regions, and the diseases which prevail, may form the subject of future contemplation.

The medical constitution of the climate of California is yet in its forming state. With the progress of cultivation, of civilization, and the changes in the social condition, new elements and combinations of elements will arise to modify the character of the diseases, to bring about the development of new creations, and the manifestation of those consequences which even now, perhaps, are silently germinating under elemental influences whose agency is not yet recognized. The actual pathologic or therapeutic influences of the climate, it is difficult to determine in a state of society so constantly changing; where exposure to its influence is so seldom permanent, or where, as yet at least, it has been of so short duration. Time and the revolutions which keep pace with it, a more settled state of society, the results of observations extended through a long series of years, and having reference to the permanent population, will alone determine a subject of so much interest.

Sacramento, April 1st, 1854.

ART II.—*A Case of Amputation at the Shoulder-Joint.* By JOHN COCHRAN, M.D., One of the Surgeons to Brooklyn City Hospital.

AT three, A.M., November 12th, 1853, I was called to see Mr. Charles Phillips, a young gentleman of South Brooklyn, who had reached home an hour previously, seriously wounded by the accidental discharge of a gun. I found him lying on a lounge, exhausted, and almost bloodless. The following is the history of the accident, as given me:

He had been out in Pennsylvania, deer-shooting, in company with some friends. At three, P.M., of the 11th, while resting from fatigue on a log, with the gun across his breast, the dog interfered with the trigger, which caused the discharge of the piece, the contents of which passed through the left arm, close to the shoulder. Binding the arm to the body with some tape, he travelled two miles on foot, five in a country wagon without springs, over a rough road, and thence one hundred and forty-five miles by railway to the terminus at Jersey City; from there, by carriage, to his residence in South Brooklyn; making in all a distance of about one hundred and fifty-five miles, the wound all this time being undressed, and oozing constantly.

Cutting open the sleeve of the coat and shirt, the wound was exposed. On the inner side of the arm, at the insertion of the pectoralis major muscle, there was a wound of the size of a dollar. On the outer side, opposite to the first, there was a long, ragged slit, extending from within two inches of the acromion to the juncture of the middle with the lower third of the arm.

The os brachii was shattered into fragments from its surgical neck to the middle of the bone, leaving a spicula of bone attached to the head. The external wound of the soft parts was owing to a considerable portion of bone being carried longitudinally through with the shot. The axillary artery was dissected out, and visible for two inches of its course, but untouched; the parts adjoining were considerably discolored and burnt with the powder.

Having carefully examined the condition of the parts, I communicated to him at once the necessity for the speedy removal of the arm at the shoulder-joint. Without a moment's hesitation, he assented by directing me to proceed. I explained to him that, in his present state of exhaustion, a little rest would be necessary before subjecting him to another and greater shock. Filling up the wounds with sponges, and applying a roller, moderately tight, from the fingers to the shoulder, and giving, at the same time, directions for the free use of broth and brandy, with perfect quietness, I took my leave, to return by daylight.

At nine o'clock, A.M., in consultation with my friends, Drs. Hunt and Ayres, it was decided to remove the arm at the shoulder-joint, although at first it was supposed we might possibly succeed in saving the head of the bone, with a view to the gentleman's appearance. But, on close inspection, the soft parts immediately around the capsular ligament were found to be ragged and burnt. This rendered any such attempt worse than useless, as we must necessarily incur the risk of extensive suppuration and a second operation.

The patient was placed upon the table, and the chloroform administered. The operation was begun with an ordinary scalpel, by carrying an incision from the posterior border of the acromion directly downwards to the upper angle of the external wound, thence across the front of the arm to the internal wound, dissecting up the parts in front of the joint. (In this way a small portion of flap was obtained.) The long head of the biceps and capsular ligament were next divided, and the head of the bone raised from the glenoid cavity. Liston's knife was then carried under the disarticulated bone; and by a single traction downwards, a long flap was made from the comparatively sound tissues behind.

There was no compression resorted to in the dissection in front of the joint; but it was necessary to stop and secure the acromial artery, which bled very freely for a moment. In making the posterior flap, Dr. Ayres followed the knife so closely with his hand, securing the artery and compressing the veins, that scarcely a tablespoonful of blood was lost. Besides the axillary, some nine or ten small vessels required the ligature. Between the twelfth and fifteenth days, all the ligatures came away, with the exception of that upon the main vessel, which parted on the twenty-second day after the operation. In five weeks the cure was complete, without the occurrence of any unfavorable symptoms. His general health at the present is as good as at any previous period of his life.

Brooklyn, *February* 16*th*, 1854.

Art. III.—*Observations on Exhaustion from the Effects of Heat.* (*Coup de Soleil*). By H. S. Swift, M.D., Resident Physician of the New-York Hospital.

Owing to the oppressive and long-continued hot weather of the past summer, an unusually large number of cases were admitted to the New-York Hospital of what is called *coup de soleil*, or, as now regarded by the profession, extreme prostration produced by exposure to excessive heats, combined, perhaps, with the effect of receiving large draughts of cold water into the system, when overheated.

So prevalent, indeed, was this disease, that at one time it was regarded almost as an epidemic, not only in this, but in neighboring cities. Several cases occurred in the country, where, heretofore, it has seldom appeared. It will be recollected that a large per cent. of the cases were fatal. The report of the City Inspector of this city alone shows 260 deaths from *coup de soleil*, without including many cases designated as "congestion of the brain" and the "effects of cold water."

It is now only five or six years since the nature of this disease was pointed out, and yet the profession, generally, have but vague and indefinite ideas respecting it, and it is a matter of surprise that medical literature is so deficient on this subject. A few short monographs, and a few reported cures, are all that can be found in regard to it. Cases are not so infrequent, nor is this affection so devoid of interest, as this silence would seem to indicate.

I have no new theories to propose, or any new light to throw upon the pathology or the treatment of this disease; the object of this paper is simply to call the attention of the profession to this subject, more especially as the season is now approaching in which we may reasonably expect a return of this "calamity."

The term *coup de soleil* as applied to this disease, is a misnomer. It is a popular rather than a professional appellation. All our authors agree that "cerebral apoplexy" is occasionally produced by exposure to the direct rays of the sun. This I regard as true *coup de soleil.* The subject now under consideration is an entirely distinct affection. It is now almost universally admitted to be mere nervous exhaustion produced by protracted and violent exercise in an over-heated atmosphere.

Of the large number of cases observed by me, none were strictly apoplectic, and no lesions were noticed in those which proved fatal, sufficient to account for death. Those two opposite conditions—the "cerebral congestion" and "nervous debility"—require opposite modes of treatment, and should be carefully distinguished from each other.

The subjects of this affection are usually laborers who have been exposed several hours during the day to the direct rays of the sun, the thermometer being over 90°. A great majority of the following cases were foreigners, many of whom had but recently arrived in this country, and who, after the deprivations of a long passage, were ill-adapted to endure great fatigue in so high an elevation of temperature.

The same condition may result after exposure to artificial as well as solar heat. Eleven patients were attacked one morning in the laundry of one of our principal hotels; several were brought to us from a sugar refinery, where, after working several hours in a close and over-heated apartment, they fell down suddenly in a state of insensibility; and we had an opportunity of comparing their symptoms and lesions with those who became exhausted after laboring in the sun, but were unable to satisfy ourselves of any distinction.

Whatever tends to enfeeble the vital powers must be regarded as the predisposing cause. This may result from muscular debility or preëxisting disease. Heat acts as the exciting cause. One patient had suffered for several weeks from an obstinate diarrhœa. He had eaten nothing on the morning of the attack, and, after imprudently walking only a short distance in the sun, fell down insensible. Another patient was suffering at the time of the attack, as we afterwards learned, from the usual *malaise* of fever, and after convalescing from this disease, passed through the ordinary attack of petechial typhus. Still another was in a cachectic condition from the influence of malaria. He was also picked up in the street, and brought to hospital in an insensible condition. These cases were not included in our Report, though they were evidently suffering from this disease at the time of their admission to the hospital.

An attempt has been made to distinguish those cases which are the result of exhaustion merely, and those who have been suddenly seized after drinking large draughts of cold water when over-heated either from exposure to the sun or by violent exercise. If such a distinction exists, by far the greater number of cases which fell under my observation would be included in the latter class, though only in a single instance were we able to trace any *immediate* connection. A seaman had been employed, during the day, in the rigging of a vessel, exposed to the direct rays of the sun. At 3 P. M., he complained of a severe pain in the head and a "sense of sinking within him." After drinking very freely from a bucket of hydrant-water, he plunged his head into it, and immediately fell down insensible. Most of the patients had been drinking water freely during the day,—some moderately,—while others had scrupulously avoided it. But a large majority of them were attacked immediately after dinner, when probably large draughts of water were employed.

For this reason I am inclined to believe that the effect of the cold water in these cases is merely to hasten the development of the disease, and that a majority of the cases reported as deaths from "drinking cold water," are really occasioned by "solar exhaustion." Nearly all the patients were exhausted by severe labor, and at their dinner they were in just the condition to suffer from the shock of receiving a large quantity of water suddenly into the system.

Deaths from the effects of cold water are not so frequently met with as is generally supposed. Dr. Dickson, of Charleston, S. C., says: "I have never seen a death from drinking cold water, nor have I been able to obtain any authentic account of such an event having occurred since I have been engaged in the practice of medicine in this city. Yet here, if anywhere, such accidents should occur. Immense quantities of ice and iced fluids are daily consumed here by persons subjected to the several conditions which are regarded as calculated to favor the morbid influence of the agent in the highest degree. The cases described by Rush I believe to have been generally cases of insolation, and that, being sensible of rapidly approaching disease, and at the same time feeling an internal heat, the patients were just procuring relief when overtaken by sudden death." Such, undoubtedly, was the case of the sailor above referred to.

The disease is usually stated to be confined to patients of irregular habits; but only a small proportion—at least less than one-half of the following cases—could be regarded as intemperate, and many of these had restricted themselves during the day to a single glass of ale or brandy.

The premonitory symptoms are usually slight, and of short duration. A laborer may, perhaps, have been employed until a late hour the previous night, and the next morning complains of a slight headache and a general feeling of languor. He takes his breakfast with less relish than usual, but resumes his ordinary duties. But, in the great majority of cases, even these slight symptoms are wanting. They are suddenly seized, while in the performance of their labors, with pain in the head, and a sense of fulness and oppression in the epigastrium, occasionally nausea and vomiting, general feeling of weakness, especially of the lower extremities, vertigo, dimness of vision, and insensibility. Surrounding objects appear of uniform color. In a great majority of cases, this was, so far as could be ascertained, blue or purple. In one instance, everything appeared red; in another, green; and in another, white. One stated that objects retained their natural color, but expressed them as being very beautiful, while to another everything appeared greatly magnified.

This may be regarded as the first stage of the disease. It is usually of short duration. In the milder forms of the disease, the stupor is only momentary. The patient is at first, perhaps, aroused with difficulty, but he gradually regains his consciousness. If, however, the attack is severe, the patient shortly passes into a state of coma. The skin is hot and pungent to the touch, and by actual experiment, according to the observations of Dr. Dowler, the temperature is elevated to 112° Fahr. The pupils are dilated and insensible to light; the breathing hurried and labored; the pulse is sometimes slow and full—sometimes frequent and feeble, though the action of the heart may continue inordinately strong up to the last moment of life.

In the third stage, the symptoms are those of collapse. The pulse becomes more frequent and feeble; the respiration, which at first was hurried and labored, now becomes stertorous, and accompanied with sighing and moaning; the skin cool, or the surface of the body may retain its natural temperature, though the head may be hot; the sphincters become relaxed; extremities cold; the countenance swollen and livid; the pupils may be dilated, but are often firmly contracted; tracheal râles appear; either the patient is quiet, as if completely paralyzed, or else convulsions, often violent in character, supervene, and he dies suddenly, or he may remain in this condition for several hours.

The first stage corresponds very nearly to that condition described by Southern writers as "solar exhaustion." Dr. Dowler makes a distinction between this "solar exhaustion" (the *coup de soleil* of northern latitudes) and what he calls "solar asphyxia." The former he regards as "a mere fainting, in which the face is pale, skin cool, or not above the natural standard, while, in the latter, the skin is burning hot, face flushed, and the mind and body are utterly insensible to impressions." It runs its course rapidly, and often proves fatal in 30 minutes. Dr. Cartwright says, the cases of "asphyxia are often incurable from falling into an *incurable* state before medical aid can be obtained"! while those of exhaustion simply, if properly treated, will yield as readily as a case of common intermittent, and almost as fatal as "solar asphyxia" if improperly treated.

The second and third stages, described in the progress of the disease, are so intimately connected that it may seem an unnecessary division; but it is more convenient to regard them separately. They differ usually in the mode of attack, and for this reason some have regarded them as a distinct condition. The stage of collapse is most frequently noticed in those who are seized late in the afternoon, "without the signs of apoplexy," after exposure to the heat and fatigue of the day. But the same condition may occur in those who have been seized suddenly "with the signs of apoplexy," and yet pathologically there *may* be no difference.

Of 60 cases which came under my observation during the past year, 44 were insensible at the time of admission, and 16 were either stupid or sensible. The pupils were dilated in 30, contracted in 19, and natural in 11. The temperature of the body was hot in 34, warm or natural in 14, and cool in 12; while that of the head was elevated in 31, warm in 11, and cool in 18.

The respiration was hurried in 44; the pulse was uniformly accelerated, varying from 100 to 160, and even more per minute. Convulsions were present in 24, delirium was noticed in only a few. 52 of the patients were males. The average duration of the fatal cases was about 4 hours.

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Convalescence is usually speedy, after the severity of the disease has passed, and reaction is fully established, varying from a few minutes to five or six hours; the patient sinks into a deep slumber, and awakes somewhat exhausted, and the cerebral functions disturbed; but this soon disappears. Two patients only complained of severe pain in the head, and at intervals exhibited great forgetfulness for nearly a week; and one was occasionally delirious.

A case was reported to me in which delirium supervened, resembling that of delirium tremens. I can conceive that such a condition may exist, but this patient was intemperate, and had been drinking to excess previous to the attack.

Dr. Pepper reports 20 cases, 10 of which died, and 3 resulted in insanity. This termination was not noticed in over 100 cases received at the New-York Hospital. In the reports of lunatic asylums, however, few cases of insanity are referable to an attack of *coup de soliel.* One patient was delirious, and with the greatest difficulty restrained.

The statistical reports are too inaccurate to furnish any satisfactory data for the mortality of this disease, as no attempt has been made in the reports to distinguish it from "cerebral apoplexy"; but this latter class is, I believe, less frequently met with than was formerly supposed; and that *their* number will somewhat diminish as the facilities for *post-mortem* examination are furnished, and that by far the greater number of cases included under the head of *coup de soleil* are nothing more than "nervous prostration." About one-half of the cases are usually fatal. The mortality of the past year will, however, be above this estimate.

The total number of cases admitted to this Hospital since 1845, is 150, of which 78 died. The mortality of the cases admitted in 1853 is 33 in 67.

The mortality of hospital practice must be greater than that in private, as very many were admitted in a moribund condition, and died before any treatment could be adopted, while others were rendered hopeless by being brought a long distance, several hours after the attack.

The prognosis will depend on the stage of the disease. In the first stage, the prognosis is usually favorable; much, however, will depend upon the treatment adopted. The symptoms indicating collapse are always unfavorable.

In 33 fatal cases, the pupils were contracted in 20, moderately dilated in 7, and markedly so in 6; while, in the successful ones, the pupils were dilated in 19, and nearly natural in 15. No case recovered in which the pupils were contracted. Mere stertorous breathing is not necessarily fatal; but after the respiration becomes *sighing* and *moaning*, the prognosis is very unfavorable; only two patients recovered after this character of the breathing was present.

To these two symptoms—the condition of the pupil and the character of the respiration—I attach much value; and if other observations shall confirm this, they will furnish the most reliable basis for prognosis.

The respiration was sighing or moaning in 31 of the 33 fatal cases; convulsions were noticed in 24. This is a grave symptom, but 6 recovered after they were present. The pulse alone is no safe criterion of the actual condition of the patient, for it may continue of fair strength throughout the whole course of the disease, with no perceptible alteration either in force or frequency, though the patient may be under the free use of stimulants. This will frequently surprise those who are unaccustomed to observe it.

A fatal relapse occurred in one instance. This patient was attacked suddenly while at his work, and lost all consciousness. As soon as he had sufficiently recovered, he walked a long distance to the Hospital, exposed to the direct influence of the sun. This exertion, combined with his previous prostrated condition, probably induced another attack. He again partially convalesced, but immediately sank into a comatose condition, from which he did not rally.

The pathology of this disease is uncertain. We have as yet failed to discover any satisfactory lesion to account for the phenomena noticed before death. It is now, however, generally admitted to be merely "exhaustion" produced by fatigue—either in the sun, or, less frequently, in a close and over-heated apartment.

The post-mortem appearances, though of a negative character, are precisely opposite those found in "congestion" of the brain or apoplexy produced by insolation—in other words, *coup de soleil.* And it is of great importance that this relation should be correctly understood, for they obviously require an opposite course of treatment. Unfortunately these two conditions are too indiscriminately called *coup de soleil.* Our nomenclature, in this respect, is imperfect, and calculated to mislead those who are unaccustomed to observe it. But we must not infer, simply because a disease has been erroneously called *coup de soleil*, that we have apoplexy to contend with. "It is debility we have to meet, and not repletion." Depletion, which is essential in the one, is almost necessarily fatal in the other.

In some cases we have apoplectic symptoms with those which properly belong to the opposite condition. And we may perhaps be puzzled to know to which class they belong. But even in these cases, we rarely find any lesion. Sometimes there will be found a moderate congestion of the brain, but no more so than we often find in cases where we suspect no lesion of that organ.

The following case may perhaps be interesting, as illustrating this:

An unknown woman was picked up in the street in a state of exhaustion, and brought to the Hospital at 8 P.M., Aug. 14th. Nothing could be learned of her previous history. She was completely insensible, pulse frequent (120) and feeble ; respiration hurried and labored ; skin burning hot ; temperature of head elevated; pupils contracted and insensible. The prognosis was unfavorable. Our ordinary treatment was adopted. Sinapisms were applied to the calves of the legs and abdomen, ice to the head. Stimulating enema of spts. tereb., brandy, and tr. capsici were administered moderately. Frictions with mustard were also ordered. Four hours after her admission, her condition became decidedly worse. The slight convulsive movements of the body, which were noticed at the time of her admission, were more marked and violent, and it was only with the greatest difficulty that she could be confined to the bed. The breathing was exceedingly labored, and accompanied with sighing and moaning—pupils dilated ; the pulse very frequent, and scarcely perceptible at the wrist ; the countenance swollen and livid ; extremities cold ; the stomach refused to retain the stimulants. The bronchial tubes became clogged with an increase secretion of muocus ; and deglutition was very difficult. The slightest attempt to swallow threatened almost immediate asphyxia. She was ordered injections of brandy and carb. ammonia.

On the following morning reaction, was fully established. The pulse 130, but fair strength. The head and surface of the body hot; eyes suffused, red and injected, fixed and

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removing the veil of mystery which surrounds it. But it must be remarked *en passant*, that there are many points of resemblance in the appearance of those who have died from the effects of heat, and the cases reported of death from lightning.

Does the heat produce death by destroying the "vital principle," as Hunter supposed was the effect of lightning? Does it produce some chemical change in the blood itself, so that it can no longer subserve the purposes of innervation? or does it produce its effect primarily upon the nervous system? This is the most plausible theory. The vital powers, already enfeebled by fatigue and the heat of the atmosphere, are unduly stimulated. The natural balance of the circulation is destroyed, and the heart contracts with a "morbid activity." The lungs are engorged with blood, and the heart labors to overcome the increased obstacle, until at length it is exhausted by this "morbid activity," and passive congestion takes place in the capillaries throughout the body.

The pathology of this disease is too obscure and uncertain, and observation too limited, to arrive at any satisfactory conclusions in regard to the *treatment*. It is at best empirical. We regard the disease as one of debility, and we partially treat it as such.

The great practical point to be regarded in the treatment is, that this affection is entirely distinct from *coup de soleil*, as generally understood by the term. It is a disease of "debility," and not one of "repletion." Depletion is generally contra-indicated, and stimulants are usually required.

In cases of *Insolation*, the lance is often employed. But these are very rare. During the summer of 1818, there were 13 cases admitted into the Hospital. These were largely bled; 60 ounces were taken from the arm by repeated bleedings; and in one case as many as 80 ounces. And the "recovery in this one was much more marked and speedy." Three of these died, and the post-mortem appearances were precisely those of "cerebral congestion." But in cases of *exhaustion*, I have never seen *a patient recover* after he had been bled.

This practice is now nearly abandoned. Formerly, nearly every case treated before admission to the Hospital had been bled. But not a *single patient* had been bled of those admitted during the past summer. They do not bear well even the local abstraction of blood by cupping.

The plan of treatment usually adopted is to place the patient in a hot bath, rendered stimulating perhaps by mustard or capsicum—or counter-irritation to the whole body by means of mustard; a stimulating enema of tr. aloes c., or, what is preferable, spts. terebinth; ice to the head *when the temperature is elevated;* brandy and tr. capsici, or even carb. ammonia if required.

The indiscriminate use of *cold affusions* is productive of harm. Injurious and often fatal effects result from them. It is a popular and erroneous idea that a patient, as soon as he is attacked, should be completely deluged with cold water. To employ it in every case would be as absurd as in cases of collapse from any cause.

Another important consideration in the treatment of the earlier stages is *rest.* In crowded cities, to which this disease is mostly confined, this caution is too much disregarded. As soon as a patient is attacked, he should be placed in a horizontal position, in as cool a place as possible, and perfect rest required. Nothing can be more serious for a patient in this condition, to be carried, as is too often the case, upon an ordinary cart for a long distance, or allowed to remain exposed to the influence of the sun.

The length of this paper will prevent any detailed account of the cases themselves. They were admitted during the attendance of Drs. Joseph M. Smith and H. D. Bulkley, and the treatment adopted during their absence was approved of by them. In conclusion, I desire to express my special acknowledgments to my senior assistant, Dr. John B. Chapin, for his valuable assistance, not only on this, but other occasions.

NEW YORK HOSPITAL, *March 15th,* 1854.

ART. IV.—*On the Use of Hydrochlorate of Ammonia in Coup de Soleil.* By J. R. LEAMING, M.D., Physician to the Northern Dispensary, N. Y.

CASE 1.—I was called in the afternoon of June 16th, 1852, to see a man at the Knickerbocker stables, on Eighth avenue, overpowered by heat. He was insensible, breathing somewhat sterterous, pulse slow and weak. Having used muriate of ammonia in the comatose condition of typhus fever with apparent benefit, and believing the nervous prostration in this case to be very similar, I prescribed it in about 8 grain doses in solution, every half hour. He was removed to his home and mustard applied to the epigastrium. With some difficulty he was made to swallow the medicine, but in about 15 minutes after the first dose the stertor ceased. In an hour he was sleeping quietly, and when disturbed, answered questions incoherently. In about three hours, he could sit up in bed and converse, but complained of great lassitude and fullness about the head. The next day he was able to walk out.

CASE 2.—I was called in the afternoon of June 22d, 1853, to see a blacksmith who had been sent to his home in 28th street, overpowered by heat. I found him entirely unconscious, without any action of the voluntary muscles, deep stertor, pulse slow and full.

I gave him the ammonia and applied mustard. I left him, but returned in an hour and a half, and was surprised to find the patient sitting up, able to converse. He complained of general lassitude and a dull pain in the head. The next day he was walking about.

CASE 3.—I was called in the evening of June 28th, 1853, to see a bricklayer, who had fallen insensible a moment after returning home from his work in the evening. I found him without stertor, but breathing slow and heavily, pulse slow and weak, entirely unconscious. I gave him the ammonia and applied mustard, then sent a messenger for Dr. Tucker, his family physician. In about an hour the Dr. called on me, and requested me to see the patient with him. We found him able to converse, complaining of debility and pain in the head. The medicine was continued, and the patient walked out the next day.

Dr. T. assures me that he has since used the muriate of ammonia, in similar cases, with gratifying success.

Case 4.—August 12, 1853, I was called in the afternoon to see a man, in 26th street, suffering from sun-stroke. Mustard had been well applied before I arrived. He was entirely unconscious, labored breathing, pulse weak and frequent. I gave him the ammonia, and when I returned, in about an hour, he was sitting up.

My notes of these cases are very meagre, but the impression left on my mind at the time, and by other cases of which I have no notes, is, that the ammonia produced speedy and satisfactory relief. If the pathological condition of sun-stroke be excessive nervous exhaustion, as I believe it is, diffusible stimulants are indicated, and I think the muriate of ammonia is the best. The patient should not be bled, ice should not be applied and continued to the head. The face and temples may be sprinkled, or sponged with cold water. Mustard should be thoroughly applied, the extremities kept warm, and muriate of ammonia dissolved in cinnamon water, given at short intervals till consciousness is restored, and afterwards at longer intervals, till the sensation of pain and fullness in the head has disappeared.

Art. V.—*A Review of Epidemic Small-pox as it has prevailed in New York City at different periods during the last fifty years.* (Read before the Society of Statistical Medicine, New York.) By J. Lewis Smith, M.D, Physician to the North Western Dispensary, New York.

In May, 1801, Dr. Jenner, whose wonderful discovery of the prophylactic power of cow-pox was at the time riveting the attention and gaining the favor of the whole medical world, wrote thus in reference to vaccination: "It is now too manifest to admit of controversy, that the annihilation of small-pox—the most dreadful scourge of the human race—will be the final result of this practice." More than half a century has passed since this pleasing prediction was uttered, and are we yet nearer its fulfilment? The bills of mortality of this city show, instead of a diminution, a gradual increase of small-pox; yet all our physicians are advocates and practicers of vaccination, and the poor may receive this blessing gratuitously by application at the dispensaries.

This increase of the variolous disease, so contrary to the reasonable expectations of the friends of vaccination, and especially the fact, that we are now witnessing the decline of the most fearful small-pox epidemic which has yet visited our Island, have induced me to prepare this paper. I trust I shall not encroach on the ground already occupied by Dr. Hutchinson, in his interesting and practical communication to the May number of this Journal.

Prior to the present century, small-pox seems to have held an unimportant place among the diseases of New York. It caused, however, an adjournment of the Legislature in 1730, then in session here (*Webster's Hist. of Epidemics*), and no doubt it visited the city, in a sporadic form, almost annually, prior to the period of the registration of deaths. Bills of mortality were first prepared and published in 1805, and our remarks must therefore be based on data furnished since then.

In the decade, commencing with the year 1805, there were in this city 413 deaths from small-pox, or 1·9 per hundred deaths from all causes. In the following decade, from 1815 to 1824 inclusive, the number was 718, or 2·2 per hundred; in the following ten years, closing with the year 1834, they numbered 1103 or 1·9 per hundred; in the next period, from 1825 to 1844 inclusive, 1606 or 2·2 per hundred, and in the following nine years, ending with 1853, 3280 or 2·5 per hundred. From this we see that the per centage of small-pox deaths, instead of diminishing, increases, and that the ratio of increase has been uniform during the last three decennial periods. The second decade shows a large proportion of small-pox deaths, in consequence of its embracing the year

1824, when a very severe epidemic of this disease prevailed. This increase in the fatality of variola is the more note-worthy, because in every European city, so far as we have statistics, there is a gradual diminution of variolous deaths. In London, Edinburgh, Cork, Limerick, Paris, Berlin, and Copenhagen, statistics show a gradual but decided abatement in the fatality of this disease. Whether in the other American cities, as well as in New York, this epidemic is increasing, or, as in the transatlantic cities, is subsiding, is an interesting point, but one which I have not sufficiently examined.

Except in the years 1819, '20, '21 and '22, when there was a long immunity from variola, at least of a fatal nature, the records of every year since 1805 show more or fewer deaths from this disease, and every month since 1847 has had at least ten. Nosologists regard it a law of epidemic diseases, that they prove most fatal after periods of comparative immunity from them. Our statistics show this to have been true of small-pox. Thus in 1811 there were 117 deaths succeeding 4 in 1810, and the years 1813 and '14, '19 to '23, '29, '33, '39, '44 and '47, all showing comparatively few interments from small-pox, were immediately followed by years of unusual mortality from this cause.

During the first quarter of the present century, yellow fever occurred at times epidemically in this city, and since its last visitation, about the year 1823, small-pox, scarlatina, and measles have augmented in frequency and severity. Prof. J. M. Smith, of this city, in an able and highly interesting report, made to the American Med. Association in 1848, in alluding to this fact, ventures the opinion that these diseases require, for their development, different climatic or atmospheric conditions from yellow fever, and that as long as the former are of frequent occurrence we need not fear the visitation of the latter.

It is a matter of some importance to determine the correctness of this view; for, if true, there is less need of imposing quarantine restrictions on vessels coming from ports where yellow fever prevails. Much light might be thrown on this point by examining the statistics of mortality in southern cities. Are these cities, which are yearly scourged by epidemics of the fever, lightly or severely visited by the three eruptive diseases? From the statistics which I have seen, I am inclined to think that these diseases, though by no means of rare occurrence, prevail less south than north, and that they prevail principally in the months when the fever is absent. Dr. Gregory remarks (*Lect. on the Erup. Fev.*) "It is seldom that two diseases are epidemic at the same time in the same district." This is no doubt true of certain of the epidemic diseases, but small-pox, scarlatina, and measles are an exception. The Inspectors' reports show not only that the annual mortality of all three has gradually increased, and in about the same ratio, but also that two, or indeed all of them, may occur as epidemics during the same month. This comports with the fact, now clearly established, that any two of these may co-exist in the same individual. These diseases, too, have much the same history, commencing as far back as they can be traced with certainty. We find them co-existing in Arabia at the rise of Mahometanism, and thence they have spread, for the most part, *pari passu,* wherever conquest and commerce have carried them. May not their close affinity, as thus evinced in the history of their occurrence, yet throw light on their nature and causes? and is there not plausibility in the conjecture, that each, as it prevents its own recurrence, may serve to mitigate subsequent attacks of the others; and that cow-pox, though it may not prevent, yet, as is thought by some, may render measles and scarlet-fever milder, producing, in a less degree, the same prophylactic effect as in case of small-pox?

Many of the Inspectors' reports present, in a tabular form, the monthly deaths from variola; and, with a view to determine the influence of the weather on the prevalence of this disease, I have added the deaths from 1816 to 1853 inclusive, being obliged to omit only eight years in this period. The result is as follows: January, 661 deaths; February, 531; March, 559; April, 309; May, 449; June, 380; July, 288; August, 243;

September, 194; October, 269; November, 370; December, 521: Spring, 1217; Summer, 911; Autumn, 833; Winter, 1713. From this we see that the mortality has been greatest in the winter, and successively less in the remaining seasons; the deaths in the autumnal months being not one half those in the winter. The question may here arise whether the known prevalence of intermittent and remittent fevers in the autumn may not have something to do with the diminished mortality from small-pox, a question which, like that in reference to yellow fever, can only be settled by a large number of statistics.

At different times and in different places, the variolous epidemics have observed no uniformity of occurrence as respects the seasons. Thus, Dr. John Cross published, in 1820, an account of the very fatal epidemic which occurred the year before in Norwich (Eng.), causing 530 deaths, of which 382 took place in the summer, and only 4 in the winter months. In Sydenham's time, according to his own statement, mild variolous epidemics began about the vernal equinox, when of an extended and dangerous kind in January. "These observations," says Dr. Gregory, "are not confirmed by modern statistics." (*Erup. Fev.* page 85.) The last epidemic which the metropolis (London) experienced began in November, 1837, reached its acme in June, 1838, being a period of eight months; then slowly declined, and ceased entirely in January, 1839. The epidemic of 1796 followed a course very similar in all respects. The Inspectors' reports show that we have had occasional mild epidemics of small-pox in the summer, but that those attended with much fatality have commenced uniformly late in the fall, or at the beginning of winter.

In order to determine more certainly if atmospheric conditions or variations, such as we can measure by our instruments, influence the occurrence of small-pox, I have examined carefully the meteorological tables contained in the Inspectors' reports since 1845. As the disease occurs in all climates and seasons, its essential atmospheric condition, if it have any, is probably of too subtile a nature to be detected by any means which we at present possess. Yet if small-pox be independent of those climatic conditions of which we are cognizant, such as temperature, density, and humidity, it is interesting to know the fact. The following Table gives the average for each month of the temperature and density of the atmosphere, the direction of the winds, and the amount of rain and snow, from 1848 to 1852, inclusive, the year '49 excepted; also the average monthly mortality from small-pox :

	Jan.	Feb.	Ma'ch	April.	May.	June.	July.	Aug.	Sept.	Oct	Nov.	Dec.
Mean Temp. of 3 daily observations	32°	33°·5	38°·6	44°·4	5 °·8	68°·6	73°·8	71°·9	63°·8	55°·	42°·7	32·1
Mean Height of Barom., 3 daily observations	30·05	30·005	29 98	29·87	30 00	30·02	29·97	30·06	29 61	29·97	29·47	30 10
Average amount of rain and melted snow.	2·8	2·93	3·63	2·92	4·42	2 74	3 35	3·71	2·42	1.59	2·9	4·53
Average days of wind towards equator.	16	13	13·5	13	12	8·5	1·3	11	12	13	17	15
Average days of wind from equator.	5·5	6	8·5	10	12	15	14	13	12	11·5	6·5	6
Average deaths from small-pox	39	42	54	36	47	43	35	22	22	25	36	58

Slight as appears the connection between this disease and the state of the atmosphere, there may yet be discovered a close connection between them. Mr. Blodget, of the Smithsonian Institute, in an able article, entitled "The Climatic Conditions of the Summer of 1853," published in the *New York Journal of Medicine* for November last, in speaking of the high temperature of the summer months, says: "It is more remarkable that some incipient epidemic was not started in full vigor, to rage after the principal inducing cause had passed away." True enough, the miasmatic diseases prevailed in the autumn to an extent almost unprecedented on this Island; and when they had subsided, small-pox followed with a mortality greater than at any previous period.

In the London *Med. and Phys. Journal* for Feb. 1809, Dr. Thomas Christie, Med. Sup. General in the island of Ceylon, writes: "Previous to the introduction of cow-pox (in Ceylon) in 1802, small-pox scarcely ever failed to visit us, at Colombo, during the prevalence of the south-west monsoon." It seems probable that long-continued winds from the same direction may so change the condition of the atmosphere as to introduce a new class of diseases, and this is probably the reason, why at times, and in certain places, small-pox has seemed dependent on the state of the winds. That variolous epidemics are not due to any intrinsic change in the nature of the disease; but rather to changes in the constitution of the atmosphere or of persons, is evident from the fact of an unusual susceptibility to kine-pox, when small-pox is epidemic, on the part of those who have once been vaccinated. During the past spring and winter, I have re-vaccinated quite a large number, and have found but few unsusceptible to a second course of the disease; and other physicians have remarked the same; a fact, by the way, which goes to prove the essential identity, or at least close relationship, of vaccinia and variola, contrary to the opinion of Dr. Gregory.

The annual reports for the years 1824, '30, '34, '39, '41, '42, and '44 give the total mortality, as well as the mortality from small-pox of the colored people. I find that, in these years, 19.6 per cent. of those who died of small-pox were colored, while only 7.8 per cent. of the total mortality was in this class. This corresponds with the received opinion that variola is most fatal among the blacks.

During the six years from 1848 to '53 inclusive, 165 deaths from varioloid were reported, or 6.2 per cent. of the deaths from small-pox. I am certain, however, that many cases reported as varioloid were really cases of unmodified small-pox. Having of late studied closely the appearances of the vaccine vesicle, I am convinced that many vaccinations which pass as genuine, and leave cicatrices, are spurious and not to be relied on, and that death from variola after true vaccination is much more rare than the bills of mortality would lead us to think. There can be no doubt, too, that some physicians call cases, which they know to be unmodified small-pox, varioloid, and if death result, the misnomer of course enters the certificate.

During the years included between 1842 and 1852, with the exception of '43 and '45, the proportion of male to female deaths from small-pox is given, viz., as 1.3 to 1; from all diseases, as 1.4 to 1. The number of males in the city is considerably less than that of females, and this strange disproportion in the deaths of the sexes has not yet been satisfactorily explained. I have examined the registers of the Northern and North-western Dispensaries, to see if there were a similar disproportion as regards the sex in cases which recover, and I find that, of 464 variolous patients, presenting the disease in all grades of severity, 240 were males and 224 females.

From measles, the deaths, from 1842 to 1852, inclusive, were males to females as 1.35 to 1; from scarlatina as 1 to 1.03. Of the three eruptive epidemic diseases, then measles and small-pox have been more fatal among males; while from scarlet fever, there has been a slight excess of mortality, but perhaps no more than proportionate to the whole number of cases occurring in the two sexes.

I have collected from the registers of the Northern and North-western Dispensaries, statistics of the ages of 549 variolous cases (variola and varioloid). Of these, 93, or 17 per cent., were one year old or under; 163, or 30 per cent., from one year to five; 126, or 23 per cent., from five to ten years; 104, or 19 per cent., from ten to twenty; 54, or 10 per cent., from twenty to forty; 7, or 1.3 per cent., from forty to sixty; and 2, or 0.6, over sixty. Forty-seven per hundred, then, or nearly half of these patients, were five years old or under. This shows the importance of an early vaccination of children.

According to Dr. Hutchison, 64 per hundred of the small-pox deaths, during the past five years, have been under the age of five. So far, then, as the statistics allow us to generalize, it appears also that the proportionate mortality is greater under the age of five than subsequently.

The question may properly be asked, among what class of our population small-pox is most prevalent. May it not be confined chiefly to foreigners, especially the Irish, who have within a few years settled in the city in such vast numbers. The Irish, more than any other class, as is well known, are disfigured by the variolous eruption, and in Ireland the proportion of deaths from small-pox is greater than in any other civilized country. In Dublin, for the ten years ending with 1851, the small-pox deaths were 2.5 per hundred deaths; in Cork 3.9; Limerick 4.1; and in the whole of Ireland during the ten years ending with 1841, 4.9 per hundred. In order to determine more certainly how far the prevalence of this disease in our city is due to the Irish element, I have learned the nativity of 599 variolous patients, treated in the Northern and North-western Dispensaries since 1848. Of these, 331 were born in the United States, 229 in Ireland, and the remainder, 39, principally in England and Germany.

Many, and probably most, of those registered Americans, were of Irish extraction, children of parents who have within a few years emigrated to this country. If we reject from the whole number those under the age of ten years, we shall find that the Irish greatly preponderate in the remainder. Thus, of 163 cases, occurring after the age of ten, I find that 54 were American and 109 Irish. From this it appears that, if it were not for the Irish population, New York would suffer much less from small-pox, probably no more in proportion than other northern cities; and we have a satisfactory explaination of the fact, that, though vaccination is more and more practised here, the proportion of deaths from small-pox increases. The bills of mortality, instead of proving the inefficiency of vaccination, as might appear at first, really afford a strong argument in its favor; for the Irish, more than any other class, neglect vaccination. Their ignorance in reference to this subject is truly astonishing; many appear never to have heard of it till advised by some friend to have it performed, and others have the most absurd and vague ideas of its nature. The large class of unprotected children furnish foci for the spread of small-pox on almost every street, and were it not for the efficiency of the great Jennerian discovery, we can see no reason why there should not be a proportionate mortality among the American population.

Our sole reliance being on vaccination, the question arises, in what manner it can be made the most available. When the Irish have once arrived and diffused themselves among our population, it is almost impossible to effect a general vaccination among them, and the surest way to accomplish this end would seem to be in making it the duty of the physicians on board the emigrant ships to vaccinate all emigrants not already protected. Once learning the simplicity and importance of vaccination, these people would probably be more anxious to have it performed on their children, born subsequently to their arrival, and by this means not only this but other cities, and the country towns, where the Irish locate, would be much less liable to be visited by epidemics of small-pox.

ART. VI.—*On the Topical Application of the Nitrate of Silver to the Larynx and Trachea in Croup.* By EDWIN N. CHAPMAN, M.D., Brooklyn, N. Y.

IN the March number of this Journal for the present year, I reported five cases of croup, treated in the last and fatal stage by the topical application of a solution of lunar caustic to the larynx and trachea. Since that paper was published, five other cases illustrating the same treatment have been presented to my notice, the particulars of which are as follow:

CASE 1.—March 18th, 1854, I was called to Mr. H.'s child, Atlantic street, 10 months of age, ill with the croup for 48 hours; previously to my attendance, the patient had been vomited repeatedly with ipecac. and Cox's hive syrup, without producing any salutary effect on the course of the disease, or mitigation of the laryngo-tracheal, symptoms, which were gradually, but certainly assuming a more fixed and grave significance; these were, whistling respiration, labored inspiration, hoarseness, almost amounting to a suppression of the voice, cough stridulous and dry, excessive thirst, full and bounding pulse. The chest failed to betray any evidences of disease, either as tested by auscultation or percussion.

Before resorting to the nitrate of silver, I wished to give the established treatment a fair and faithful trial, having full confidence in the caustic, as long as the disease was limited to the tracheal and laryngeal mucous membrane. It matters little whether that disease consists of mucous or sub-mucous inflammation, or pseudo-membranous or diphtheritic exudation; over one and all the nitrate of silver possesses a power almost magical.

I directed one leech to the top of the sternum, the bleeding from which was to be promoted by warm fomentations for two hours or more, unless faintness supervened. After the leeching had produced its full effects, a warm bath for half an hour, and whilst the child is in the bath, one-half teaspoonful doses of the following mixture to be given every ten minutes till free emesis occurred: ℞—Tart. antimonii, gr. ij, syrup ipecac. ℥i.

4 P. M. A free and copious flow of blood had followed from the leech, so much so as to make the child pallid and languid; free and powerful emesis from the emetic, attended with the prostrating effects of the antimonial was produced, but without causing the least apparent effect on the laryngeal

inflammation. No mucus was discoverable in the matters vomited. Ordered for the night 15 drops of the above mixture, or sufficient to nauseate every hour.

March 19*th*. No marked change in the condition of my patient. Continue mixture and apply a blister, 4×4 inches, to the top of the sternum. In the evening an emetic of ipecac.

March 20*th*. No alteration for the better; an entire absence of secretion, at least of mucus. No evidences that the chest is implicated in the disease. Continue treatment.

8 *o'clock, p. m.* More alarming and aggravated symptoms begin to manifest themselves; constant labored inspiration, with exacerbations, threatening suffocation; purple, suffused countenance, torpor and lethargy. The medication has failed to check in the least the course of the disease, which has, notwithstanding, slowly but surely advanced to serious, if not permanent obstruction in the windpipe.

I now applied ℞ Arg. nit. ʒss, add Aq. dist. ℥i misce—to the larynx and trachea, introducing the swab at least three inches below the rima glottidis.

March 21*st*. During the night there was no marked amelioration of symptoms. Applied caustic as before, which resulted in free vomiting of a substance very tenacious and adhesive, albuminous in appearance, and not at all resembling the proper mucous secretion. Reapplied the caustic in the evening with a like result.

March 22*d*. Improved; reapplied caustic; mucous secretion begins to take the place of the albuminous, though it is still glary and lymph-like. Prescribed an expectorant of senega and squills.

March 30*th*. Discharged—cured.

CASE 2.—*May* 5*th*, 1854. Child of Mr. S., Amity st., 18 months of age, suffering from an attack of the croup for six days. For the last two days it had been under the careful and judicious treatment of Dr. Drake, who had employed all the usual means of combating the disease, viz., antimony in divided doses, mercurials, warm baths, cathartics, &c., but all without avail. An antimonial emetic failed to operate, though continued until three grains had been given.

The patient presented the following symptoms: laborious inspiration, with a permanent constriction of the calibre of the larynx, and attended with a dry whistling sound, as though the mucous membrane was devoid of moisture; no violent exacerbations; voice muffled and nearly suppressed; cough dry, ringing, and sonorous; pulse full and strong; skin disposed to perspiration; chest not implicated.

As Dr. Drake had tried the approved means of treatment assiduously without producing any beneficial effect, we resolved to resort to the caustic without further delay. It was employed in the same manner and of the same strength as in the last case. Emesis occurred with the discharge of a substance gelatinous and albuminous in appearance, mixed with shreds which had the semblance of false membrane in the formative stage. Ordered ℞ Hydrarg. sub mur. gr. iss., cretæ ppt. gr. viij. ℳ, Ft. chart No. viij. S., One every third hour, also one-sixteenth of a grain of antimony every second hour, for the purpose of producing a nauseating effect.

May 6th. Laryngeal symptoms slightly improved; reapplied caustic with an effect similar to the day previous; directed a cathartic and omitted the mercurial; ordered ℞ Syr. senegæ. ℥ij; ipecac, ℥i, given to produce vomiting at first, afterwards in ʒss. doses every hour. May 7th, improved; continue treatment. May 9th, cured.

CASE 3.—*April 26th*, 1854. Mr. McL.'s child, Columbia st., 16 months of age, had suffered with croupal symptoms, of a mild but insidious character, for the last seven days, which, from the onset, were gradually assuming a more dangerous character. At 8, A. M. there were the following symptoms: difficult and labored inspiration; croupal cough; profuse perspiration; loss of voice nearly complete, respiration of natural frequency, and attended with noisy rhonchi throughout both lungs; percussion clear. Directed two leeches to the throat, to be followed, after they had bled freely, by an antimonial emetic.

4 P. M. The emetic operated freely, with a copious discharge of mucus, but without any mitigation in the symptoms. Applied the caustic, the same as in the other cases, and directed a blister 4×4 inches to the chest. Directed also an expectorant, composed of squills, senega, and carb. ammonia, with a nutritious diet.

The child died on the following day at 12 o'clock, M., with symptoms of the same character as those of the previous day, but more profound and aggravated. Inspiration was not only difficult, but short and rapid. The catarrhal inflammation seemed to affect the entire mucous membrane of the respiratory apparatus.

CASE 4.—*March 27th*, 1854. A child of Mr. G., Wolcott street, 20 months of age, laboring under an attack of croup for five days, had been treated by domestic prescriptions until the day previous, when Dr. Brooks, a well-known practitioner of this city was called to attend it. About the same time, Dr. Harris, of Williamsburgh, saw the case. They employed the usual means for combating the disease, but without producing any change in the unfavorable features of the case. In the evening, an attempt was made to introduce caustic into the wind-pipe. On the morning of the fifth day, the caustic was applied a second time.

At 4 P. M., when I first saw the patient, it presented symptoms almost identical with the last case. There was a catarrhal condition, sub-inflammation of larynx, trachea, and bronchial tubes, which had attempted resolution by a profuse secretion of mucus. The child was in a half somnolent, torpid condition, aroused with considerable difficulty, and breathing not only as if there were great constriction about the larynx, but much more rapidly than natural. The tracheitic symptoms, though the mucous secretion was very free, were of the most grave and serious character. Moist rhonchi were heard all over the chest; percussion clear.

We applied caustic, as in the preceding cases, directed an expectorant of senega, squills, and carb. ammonia, and a blister 4×4 inches to the chest.

March 28th. The child died at 9 o'clock A. M., of extensive inflammation of the bronchial mucous membrane.

CASE 5.—*March*, 1854, Master W., from Massachusetts, a lad 10 years of age; consulted me on account of an affection of the larynx and trachea of 18 months' duration, attended with a croupy cough, hoarseness constant; subject to exacerbations from changes of the atmosphere; tenderness in the crico-thyroid space. I applied caustic on eight different occasions, with an interval of from four to six days. His symptoms constantly improved, and, May 1st, he was discharged cured.

REMARKS.—Setting aside spasmodic croup, arising from causes sympathetic, all cases assuming a fatal character naturally divide themselves into three classes: the membranous, catarrhal, and diphtheritic. The last differs from the first, in frequently commencing by an exudation in the mouth or face, which, by continuity of tissue, extends into the respiratory tubes. In none of the ten cases reported by me was this diphtheritic exudation perceptible, though my attention was most particularly directed to discover it if present. All were either of membranous or catarrhal character; two of them had perfectly organized false membrane; and recovered; of four cases which, from the want of secretion till the caustic was used, and the appearance of the matters subsequently vomited, were judged to be of the membranous variety in the initiatory stage, three recovered and one died. Of the two catarrhal cases, which were nearly moribund at the time caustic was resorted to, both died. One chronic case, from congestion of the mucous membrane of the larynx, was cured. One case, probably membranous, which recovered from the croup, died two weeks afterwards from marasmus.

Of these ten cases (including those previously reported), seven recovered from the disease, and three died.

The duration of the disease before the caustic was resorted to was respectively 72, 60, 36, 48, and 60 hours, and 4½, 6, 7, 5 days, and 18 months. Faithful and thorough medication was employed in all excepting one, before resorting to the caustic, yet without avail. Not one of the nine acute cases, in my estimation, could, in the desperate strait to which they were reduced, have recovered by any other known method of procedure, excepting from the doubtful and unsatisfactory operation of tracheotomy, which, in hands the most skilful and experienced, yields results far from being favorable to its repetition. We can readily imagine a case in which suffocation might be imminent, from an obstruction localized in the larynx and upper portion of the trachea, where tracheotomy holds out a solitary and perhaps the only hope for the patient. We have no time to wait for the remedial powers of caustic, which, from its very nature, requires an appreciable interval—very likely five or six hours—before its peculiar powers are displayed in subduing the inflammation or disorganizing the pseudo-membrane that may have been secreted. Unless greatly deceived, even such a case would not require the operation, were the caustic thoroughly and efficiently employed at an earlier date, whilst the obstruction is not too serious, and the powers of life are still strong. We sadly need some remedy, more general and universal in its applicability than tracheotomy, to which we may appeal with confidence, in all cases hastening on to a fatal issue, after active and efficient medication has been resorted to, without producing a favorable crisis.

Such a remedy I confidently trust we shall find in the nitrate of silver, when its powers have been more generally tested, and its application to the seat of the disease becomes familiarized by frequent and careful practice. I do not despair of seeing it used with as great an assurance of success as in those other kindred inflammations of the fauces, of whatever nature or kind, in which we cauterize so confidently and with such beneficial effects. Even in diphtheritic pharyngitis, between which and the false membrane of tracheitis there is such a close resemblance, we confidently appeal to this remedy, almost certain that the inflammation will subside, and the exudation be detached in shreds and disorganized portions, before the almost magical power of this potent article. Its efficacy, when thus applied, can be observed by the eye.

I trust that it will be found that the mucous membrane of the larynx and trachea of a similar organization will be equally as amenable to the treatment by cauterization, as a like disease in the pharynx, whether that disease consists of inflammation, or has resulted, in addition, in a lymphatic exudation of pseudo-membrane. Analogy bears me out in asserting, what my experience demonstrates to my own satisfaction, at least, that similar tissues, affected with similar diseases, require for their cure the same remedial agent, unless there are other good reasons why its powers would be less efficacious in the given case.

JUNE 1ST, 1854.

ART. VII.—*A Case in which a Cystoid Tumor of the Ovary was Successfully Punctured through the Vagina.* By J. MENNINGER, M.D., of New-York.

AMONG the many diseases to which the ovaries are subject, the degenerations and tumors, especially the so-called hydrops ovarii, are deserving of our special attention. We purpose to speak of the treatment of the latter form of disease by paracentesis, performed through the vaginal wall, in connection with a case in which this operation was recently successfully practised.

Carus distinguishes three different species of ovarian dropsy, viz.: 1. Hydrops ovarii saccatus, or the collection of water or fluid between the serous and fibrous membranes of the ovary; 2. Hydrops hydatidosus, or, transformation of the ovary into a membranous sac, containing real hydatids. 3. Hydrops cysticus, or cellulosus (cystic sarcoma of Abernethy; emphysema cellulosum, or cystose tumor of Mason Good), in which the contents of the tumor are seldom serous, but thick, sanguinolent, purulent like chocolate, ichorous, glutinous, and of different colors. The case which follows is classified under the third form of degeneration.

Paget, one of the most recent and able writers on pathology, (*Lectures on Surgical Pathology.*) arranges cysts under the titles of "simple" or "barren," and "compound" or "proliferous" cysts.

He enumerates the different orders of the former and latter, and brings the above case under the compound or proliferous cysts; but especially of it he says: "these compound cystoid growths may appear equally compound, though they are only simple cysts clustered or grouped together."

CASE.—Mrs. Reyher, 29 years of age, midwife, emigrated from Germany to this country fifteen months since, and has since resided in this city. She is of medium size, well-formed, and, with the exception of her present difficulty, enjoys good health. She was never previously affected with any serious illness; first menstruated in her fifteenth year, and continued to do so regularly until her marriage in her twentieth year; soon after which, she became pregnant, and was delivered of a healthy female child. She did not again conceive, although still living with the same husband. Her menstruation, which reappeared ten months after delivery, was regular until fifteen months before the date of the operation, with the exception of five months, two years since, during which period she suffered a chlorosis, caused by a cold, and depression of spirits on account of the sickness of her husband, who had emigrated before her to America.

On the 25th of November, 1853, the patient was forced to take to her bed on account of pains in her abdomen, especially above the pubes, which she had experienced, but in a less degree, during the previous week. These pains were aggravated by motion, and still more in the effort to evacuate the bladder and the bowels. On the morning of the 26th, I saw her for the first time. In addition to the above-mentioned symptoms, she now complained particularly of frequent vomiting, from which she had suffered during the previous night, and which had greatly increased the pain in the abdomen. The tongue was thickly coated, appetite gone, and the pulse accelerated. Ordered an effervescing draught of carbonate of potash and citric acid, which relieved the vomiting and pain until evening, when both returned, with little less severity than the night before. Upon examining the abdomen, I discovered, on pressing deeply just above the pubes on the left side, a small, resistant tumor, which was painful, but not as in peritonitis, and not markedly more so than the remaining portion of the abdomen. The patient thought herself pregnant, because the menses had not appeared in about eight weeks; but that circumstance did not appear to account for all the symptoms present. The diagnosis remained uncertain. I ordered emollient cataplasms, which gave temporary relief during the night, but on the following morning I found her condition as unfavorable as before. I gave calomel, twelve grains, divided into eight doses, and followed it with an emulsion of castor oil and manna; this produced a free evacuation of the bowels, and, in consequence, a slight relief of pain. Externally, unguent. hydrarg. cinereum, with iodine, was applied. These remedies, however, gave only temporary relief.

On the 29th of November, the catamenia again appeared, just two months after her last menstruation. The vomiting and pain ceased, the tumor seemed to enlarge, and was now just above the symphysis. In the afternoon, with pains like those of labor, a membraneous mass was discharged, which had the appearance of a miscarriage, in the second month of pregnancy. On the following day, the former pains returned; the bleeding ceased; the pulse was ninety, and small; the patient was weak, and had not been able to obtain sleep for five days.

A more careful examination became necessary, and I now for the first time made a careful exploration of the contents of the pelvis *per vaginam.* I found that the tumor on the median line above the pubes was the same which I had felt three days before more deeply on the left side; that it extended to the left side; or rather, that the tumor, situated deeply on the left side, extended, by enlargement, to the middle and right side. It also rose upward, above the symphysis, three fingers in breadth. The tumor was felt protruding into the vagina, from the left side, crowding the uterus slightly downwards, and to the right side. The diagnosis was a tumor of the ovary, the nature of which remained to be determined, although its hardness, and equal elasticity, its rapid growth, and also the evidences gained from palpitation and percussion, seemed to indicate fluid contents. After the employment of various external and internal remedies, I found that the best means of relieving the symptoms, were the administration of aperients (manna and Seidlitz powders), and the application of cataplasms of flax-seed and chamomile flowers.

After some weeks, the pain occasioned by the evacuation of the bowels and bladder ceased, and the patient felt well while lying in bed. When out of bed, and making exertion, the pain returned, and she would be compelled to lie down. The appetite had gradually improved, but still she was emaciated. In the mean time, I constantly observed that the tumor was enlarging, and that it could be felt more easily in the vagina, with the index finger, than formerly, pressing the womb still more strongly downward, and to the right side, so that the whole now lay entirely to the right of the median line. The tumor extended upward to the umbilicus, and upon the right side nearly to the crest of the ilium; it was symmetrical in its extent and elasticity, and but one cyst could be distinguished. Still, there was an indistinct feeling on the right side, above the pubes, as if there were two tumors, one lying above the other, the edge of the lower one being perceptible below the edge of the other. Fluctuation could be distinctly perceived through the vagina, but not at all through the abdominal parietes; it was most distinct when the finger, introduced into the vagina, was pressed against the tumor, and percussion was made externally by another. This was the condition of the patient, and the tumor, in December. On the 25th, the menses appeared exactly at the regular period, and on their cessation she thought herself better, and began to walk about; she attended several cases of midwifery, as midwife, during the last days of December, but it aggravated her symptoms so much as to compel her to take to bed again. I had already spoken to her of the probable necessity of an operation, and described to her the method I proposed to pursue,—an operation which had recently proved successful in the practice of my friend Dr. Shnetter, of this city. On the 7th of January, Dr. Shnetter saw the patient, and confirmed the diagnosis, and agreed to the plan of operation. The patient was now failing rapidly; she had hectic perspirations, and the weight of the tumor was a great burden. She herself estimated the circumference of the abdomen, at the lower part, equal to the seventh month of pregnancy; but the tumor did not rise above the navel, and the abdomen was broader and less round and high than is usual in the sixth or seventh month of pregnancy. The patient now grew impatient of delay in the performance of the operation.

The operation which I designed to perform was with slight modification the one proposed by Kiwisch in 1846, and which he several times practised, viz., puncture of the cyst through the vagina, enlargement of the wound, the insertion of a tube, and the injection of warm water to wash out the matter until the entire destruction of the cyst by suppuration took place.

The operation was set down for January 11th; at this time Drs. Boldeman and Stephen Smith were present, and examined the case. Chloroform was administered, but the patient was so restless, and took the anæsthetic so badly, that it was deemed advisable to defer the operation to a subsequent day. On the 13th of January, with the assistance of Dr. Boldeman, I proceeded to operate.

Operation.—The patient was placed across the bed, the hips being brought near its edge, her feet resting on chairs, and chloroform administered. I then introduced a curved trocar and canula into the vagina, and, conducted by the index finger of the left hand to the most prominent point in the tumor, I plunged them into the cyst. The trocar was now removed, and a gush of fluid followed; the canula was retained; through the latter I then introduced a bistoury, curved upon the side, with a button, as described by Recamier,* and, withdrawing the canula sufficiently to allow the cutting edge to incise the wound, I proceeded to enlarge the opening, managing the instrument with the right hand, and guiding its blade with the left index finger. The walls of the cyst were very thick, and were cut with difficulty. Removing now the bistoury, I again pushed forward the canula into the wound, and through it passed a sound which served as a guide to the introduction of a tube into the cyst after the removal of the canula. This tube was a piece of an elastic stomach-tube, about ten inches long and more than one-third of an inch thick, and was retained in the wound to afford an exit to the contents of the cyst. The operation was completed in about twenty minutes. The fluid discharged measured nearly two quarts, and had the consistency of thick pus, and was of a chocolate color. On examining it under the microscope, it was found to consist principally of shrivelled blood-corpuscles, pus globules, and a few epithelial scales.

Upon recovering from the state of anæsthesia, the patient felt well, lighter and easier than before, and complained only of a slight soreness at the point were the puncture had been made. There was no reaction following the operation on this or any subsequent day; she took half of a Seidlitz powder daily, as before the operation, until her convalescence. On the following day, the amount of fluid which had escaped from the tube and vagina since the operation was six or eight ounces; the secretion was purulent, and the tumor was still found to extend midway between the pubes and navel. On the second day, I found my patient in good condition, had slept well, but the matter discharged was more ichorous, and had a penetrating odor. Injections of warm chamomile tea through the tube produced a better secretion, and the bad odor of the discharge disappeared. On the third day, I changed the tube, and, in the absence of a larger one, made use of a large catheter, through which the purulent matter did not find so ready an escape. The patient continued to do well until the sixth day, when she began for the first time to complain of not feeling well, and there was evidently some febrile excitement. On the 7th day, her condition was much more unfavorable; the pulse 125, small; great prostration; tendency to faintness, and slight delirium during the night. Conjecturing that these symptoms were due to a retention of the purulent discharge from the cyst, I immediately withdrew the catheter, which gave exit to a large quantity of matter. A larger tube was now inserted and injections more frequently made. Her condition improved, and on the following day she complained only of weakness. I ordered decoct. of cinchona and sulphuric acid, with liquor anodyne, from which the patient derived very marked benefit; in two or three days after, she expressed herself as feeling quite well.

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* . . . . . Si je ne trouverais pas l'ouverture du kyste suffisante j'examinerais s'il ne serait pas facile de l'agrandir avec un bistouri boutonné, courbe sur le plat, conduit par la canule de trois-quarts, etc.—*Revue Médicale Française et Étrangère*, Janvier, 1839.

The discharge up to the present time averaged one or two ounces in the twenty-four hours; during the last night, however, it amounted to nearly a quart from a sudden eruption.

On the night of the 22d of January, the tube slipped from the wound unknown to the patient, who slept soundly. So much time had now elapsed, that I failed in my efforts to reintroduce the tube. The finger and tube could be readily passed through the wound in the vagina, but a careful and prolonged search for the opening in the cyst proved unavailing, as the two wounds now did not correspond. I ordered large injections to be made into the vagina, at the same time that a napkin applied to the vulva prevented its escape. By this means I had the satisfaction of seeing pus escape freely with the injection, the latter having evidently penetrated to the cavity of the cyst. On the following day, I endeavored again to introduce the tube, but without success; this attempt was repeated two or three times after, but, as the purulent discharge became free, I desisted, satisfying myself simply that the opening into the vagina was patulous. On the 12th day of the operation, and the third .after the escape of the tube from the cyst, nearly two quarts of purulent fluid was discharged with a sudden gush. The quality of this matter differed from that which escaped during the operation only in being of a more purulent character. The quantity of matter discharged now diminished to one or two ounces in the day, and the improvement in the health of the patient was proof that there was now no retention of pus.

I cannot explain these two large and sudden discharges of purulent fluid, the one on the night of the 20th, and the other on the 25th, more plausibly than by supposing that each was the result of the rupture of an adjacent cyst into this one, which communicated externally, the walls of which had become thinned by ulceration. The local changes, which, on examination, were found to have taken place, confirm this opinion. The uterus immediately regained its normal position in the median line,—the tumor was diminished to the size of a hen's egg, and the discharge from the vagina became much less. The strength of the patient increased in a degree proportionate to the diminution of the discharge. About the 6th of February, the patient was able to be out of bed during most of the day, and the discharge had from this date to the 23d reached its minimum. On this day the menses made their appearance, after which every appearance of the former discharge disappeared, nor could a careful digital examination detect any remains of disease. The patient's appearance improved, and, although she had not recovered her former strength, she returned to her daily duties.

Up to the present time, June 3d, the patient has continued well, with the exception that in March and May she was taken ill with slight fever, gastric symptoms, pain in the præcordia and above the right hip, and enlargement of the liver. The first attack confined her to bed three days; the last, but one. The liver remained enlarged and hard for several days each time. Exposure to cold and mental excitement seemed to be the cause of these attacks. I examined her a few days since, and could discover no trace of her former difficulty.

The puncture of cystoid tumors of the ovary, through the vagina, has been rarely practised, except when, by their protrusion into the vaginal cavity, they have obstructed the progress of labor. The first operation of this latter kind related in English medical literature, was performed by Dr. Ford, the patient surviving the operation six months (Denman.) In the *Medico Chirurg. Trans.*, vol. 7, Mr. Park details the histories of several cases in which ovarian tumors complicated labor; and in three, he resorted to puncture of the cyst, through the vagina; all recovered. Subsequently, Dr. Merriman reported, in the same work,* similar cases.

But the operation of puncture through the vagina, for the purpose of effecting a radical cure of these growths, independently of their connection with parturition, though attended with a fair average of success, has met with little favor, and is not even mentioned in most surgical treatises.

The first operator was Callisen, who punctured the vagina, both for the relief of ascites and a variety of encysted dropsy, as appears from the following passage in his work: † *Sic quoque cautam punctionem*

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* *Medico-Chirurgical Transactions*, vol. x., p. 50.

† *Systema Chirurgiæ hodiernæ*, t. II., p. 59.

per tumorem eminentem, et fluctuantem in vagina uteri cum successu institui. It seems, however, to have been discussed still earlier; for, on the occasion of Marcan, a surgeon of Turin, communicating an operation of this kind to the *Acad. of Surg.*, Paris, in 1788, M. Allan reminded this body that he had presented a memoir in 1767, wherein he recommended puncturing ovarian cysts through the vagina, in preference to any other part.* The operation has, during the last twenty years, been more frequently performed than previously, and with a degree of success which at least entitles it to serious consideration. Kiwisch states,† that he has operated several times successfully by this method, and remarks that others have also practised it. In a memoir by M. Tavignot, entitled *De l'Hydropsie enkystée de l'Ovarie, et du Traitement qui lui est applicable,*‡ four cases are related. In one, the cyst was punctured to facilitate parturition, and the patient recovered. The second was undertaken, but unsuccessfully to effect a radical cure. The other two were operated upon by Récamier and Michon, and both proved fatal. One had an attack of peritonitis and pneumonia; in the other, upon attempting a re-puncture, the instrument entered the peritoneal cavity. In an elaborate monograph, entitled *Des Tumeurs fluctuantes du petit Bassin, et de leur Ouverture pratiquée par le vagin,*§ by Hyppolite Bourdon; several successful cases are recorded, and the operation is strongly advocated. In Great Britain the operation is rarely mentioned, although English surgeons early recognized the necessity of puncturing ovarian cysts when they obstructed labor. An operation for the cure of ovarian dropsy is related in the *Archives Génèrale,* as having been performed in the Middlesex Hospital, London. Mr. Ogden reported a case in the *Lond. Med. Gaz.*, May, 1840, p. 348, in which he punctured an ovarian tumor, through the vagina, which, by its pressure, caused complete retention of urine. Before resorting to this operation, however, he punctured the bladder above the pubes. The discharge from the ovarian tumor continued several days and, when it ceased, no re-accumulation of fluid followed, the cure remaining complete. The operation was recently performed in this city by Dr. Shnetter, and was completely successful. It is published in the *Prag. Viertcljarschrift*, 1854, and is, so far as we are aware, the first of the kind in this country.

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* *Sabatier, Médéc. oper.*, t. I., p. 210.

† *Klinische Vorträge über specielle Pathologie und Therapie der Krankheiten des weiblicher Geschlechtes.* II Abtheilung, Prag. 1749.

‡ *L'Expérience,* No. 160, 1840.

§ *Revue Médicale,* Sept., 1841.

In regard to the propriety of the operation, Tavignot very justly remarks that nature has indicated the proper method of curing these cysts by the frequency with which they have ruptured into the vagina, and completely recovered; and, adding to this the projection of the tumor into the vagina, and its distinct fluctuation, he traces readily the origin of the operation. He bases the propriety of the operation upon the following considerations: 1. The cyst is punctured at its most depending portion, and the escape of the fluid is thereby favored. 2. An ordinary sound being retained in the wound, gives exit to the fluid as fast as it collects, and allows the walls of the cyst to collapse. 3. It favors the formation of a fistula at a point most favorable to effect a cure.

The success of the operation itself depends, in a great measure, upon the freedom of the discharge, as is illustrated in the above case and others to which we have referred. When the matter was allowed to collect, by the escape of the tube from the opening, symptoms of irritative fever set in, and, unless relieved by the free discharge following the injection, the case would undoubtedly have had a less fortunate termination. On this account it is very important that the opening be freely made, and the tube introduced, of a capacity sufficient to allow of the free escape of the contents of the cyst. Another point of special interest in managing the case, is to be careful to maintain the tube constantly in the wound, except to exchange it; for, if allowed to escape, it has, in several instances, involved the necessity of repeating the operation. This seems to be due to the change in position, which the cyst may undergo, and thus prevent the correspondence of the two wounds.

Appended, is a table of all the cases of this operation, with which we have met in our reading, with the results in each case. We have not included cases where the operation has been performed to facilitate labor, and which have, in many instances, been followed by complete recovery. The whole number is ten, of which six were cured, three died, and one had a return of the disease. Of the three fatal cases, in one, peritonitis was set up from a puncture of the peritoneum in attempting to repeat the operation, after failing to find the former opening in the cyst. In this case also the cyst was found to have undergone a partial scirrlus degeneration. In the second, the vagina was opened from above, and the patient died from a complication of dis-cases, though for a time she progressed favorably. Of the third fatal case, we have no note of the cause of death; she survived the operation about a month.

Table of Ten Cases in which Ovarian Cysts were punctured through the Vagina to effect a Radical Cure.

NO.	AGE.	OPERATION.	RESULT.	REMARKS.	AUTHORITY.
1	—	Simple incision.	Died on 30th day.		M. Dubois, *Revue Médicale*, 1838.
2	28		Cured.		M. Récamier, *Dict. Med.*, t. 5.
3	26	Passed a long curved trocar into abdominal wall and downward through the cyst into the vagina.	Died on 20th day.	Peritonitis and lung complication	M. Récamier, *Revue Médicale*, Jan. 1830.
4	—	Punctur'd with a pharyngotome.	Cured.	Cure complete on the 39th day.	M. Récamier, *Revue Médicale*, 1840.
5	—	Puncture with trocar.	Return of disease.	Canula was not retained in the wound after puncture.	M. Nonat, *L'Experience*, 1840.
6	35	Puncture with trocar.	Death in 6 hours after last operation.	In attempting a second operation the trocar entered the peritoneum.	M. Tavignot, *L'Experience*, 1840.
7	—		Cured.	Discharge continued 64 days.	Mr. Arnott, *Archives Génerales*, vol. 56, p. 487.
8	32	Simple puncture with trocar	Cured.	Discharge continued several days.	Mr. Ogden, *Lon. Med. Gaz.*, vol. 26, p. 349.
9	—	Puncture with large incision.	Cured.	Operation performed in New York.	Dr. Shnetter, *Prag Vierteljahrschrift*, 1854.
10	29	Puncture with large incision, and introduction of large tube.	Cured.		Dr. Menninger, *N. Y. Jour. of Medicine*, vol xlii. (N. S.), p. 75.

ART. VIII.—*Extracts from the Report of the Proceedings of the New-York Pathological Society.* (Selected and prepared by Committee of Publication.)

Cancer of the Breast.—Appearances of Retrogression of Cancer. By T. M. MARKOE, M.D., one of the Surgeons to the New York Hospital.

Dr. MARKOE exhibited specimens taken from a woman who had been under his care some two years, and gave the following history of her case:—She died at the age of 51. In one of her breasts there appeared, some years ago, a slight discolored spot, which soon assumed the form of a tumor, and at length grew to occupy the whole centre and substance of the breast. Soon after the tumor had progressed thus far in the first breast, a similar tumor made its appearance in the other breast, and progressed in the same insidious manner, without inflammation or redness, and, at first, without much pain. As the breasts grew to a considerable size, they became hard, and she suffered a great deal of pain. This period lasted about four years, during which the progress was very slow and gradual. About this time she came to this country from England. For a year or more after her arrival, no apparent change took place, except that both breasts had become nearly of a size; they were as large as the two fists, hard, and insensible. She made use of some quack remedies, which had the effect, after a year or two, of reducing the volume of the breasts; they also became less painful, and the skin was shrivelled and horny, so that the nipple began to look like a warty excrescence. There seemed to be a flat indurated substance under the nipple, with hard lines passing from it. At this period she came under his care, not on account of her breasts, for she supposed they were in a fair way of being cured; but for some vague affection in the hypochondriac and epigastric regions. Upon investigating these symptoms, he was led to suspect a transfer of the disease of the breast to some of the internal organs. Flatulence was a symptom throughout the progress of the disease. After a time, the abdomen became somewhat distended with fluid, which increased until the case became a fair one of abdominal dropsy. He put her upon a mild mercurial course, which unexpectedly produced severe ptyalism. For a time after this, she was so much more comfortable that he ceased to attend her. Finally, she again sent for him, and he found that the dropsy had reached a point which threatened suffocation. He proposed tapping, but she refused until suffocation became imminent, when she yielded, and he drew off twenty-one quarts. Symptoms threatening peritonitis supervened, but soon subsided, and she rapidly recovered. The tapping was repeated at intervals of five to seven weeks while she lived; the quantity of fluid removed increasing at each repetition of the operation, from 21 quarts at the first, to 35 quarts at the eighth. After each tapping, she would get up and resume her business, and continue thus until the distension of the abdomen became so great as to compel her to seek relief in the operation. Previously to the last operation, she was attacked with vomiting, or rather rejection of her food. She died exhausted by the long continuance of the disease, the rejection of food, and excessive pain.

On post-mortem examination, three or four quarts of clear, transparent serum were found in the abdomen. The viscera presented a beautiful appearance; the intestines stood out in relief, as if injected with plaster; the surface was studded with tuberculous-looking masses, closely packed together, varying in size from a pin's head to a pea; and scattered here and there were little transparent vesicles, containing fluid. Around these little masses there was a peculiar vascularity, and the whole surface of the small intestines were more or less agglutinated by old false membrane. The principal seat of this deposit was in the small intestines, but the spleen was covered entirely with something of the same nature. A portion of the liver was attached to the ascending colon; the parietal peritoneum, though not injected in the same way, presented the same tubercular appearance. He supposed he had found, in the evidences of chronic inflammation, the cause of the dropsy; but further examination revealed the portal vein compressed by the deposit of new matter in that portion of the mesentery which enclosed it, this deposit extending along the vein to the liver. The vein itself was healthy. This condition of the vein was probably the principal cause of the dropsical symptoms

At the lower part of the abdomen, he found a condition of things which he had not before seen. The whole of the intestines appeared as if their cavity was injected; they could be felt, through the abdominal wall, after each tapping, like coils of rope. The explanation of it was here seen; the coats of the intestines were infiltrated with this matter, so that they were thickened and swelled out like a solid cord. It was not easy to recognize a canal in the upper part of the rectum, but the lower portion was more natural. The same deposit covered the uterus and ovaries; a fallopian tube had been caught in one of the serous cysts upon the ovary, and was stretched out as a broad band over it. The new deposit, whatever it was, seemed to be confined to the peritoneum and portal vein.

The breast was in the same condition as when she first came under observation, two years before.

On section, the knife passed through a dense yellowish white substance, having the appearance of partially dried fibrous tissue, and spread out in a layer of about one-third of an inch thick under the nipple, to which the nipple was attached. No trace of the normal structure of the gland was apparent. The shoulders and back were covered with tubercles under the skin; the muscle and bone seemed to be perfectly healthy.

The most important feature in this case was the fact of an apparent absorption or retrogression of a cancerous tumor. The history of the breasts would establish pretty clearly that it was a case of cancer; and if we could determine that the abdominal deposit was cancerous, it seemed to be a pretty clear case of partial disappearance and atrophy of a cancerous tumor, with reproduction in another part. One symptom which seemed to him as most certainly indicating the character of the disease, was the hard tubercles all over the shoulders and back, which by their prominence made the surface irregular. He was not, however, fully satisfied of the cancerous nature of the deposit, but its general appearance led him strongly to suspect it. The only other deposit would be tubercular, but in this case there would have been false membrane effused, which did not exist in any considerable degree. Every part was examined except the brain; in one part of the lungs there was a very little of this tuberculous-looking matter. As this was a point of much importance, he had made a careful examination. The heart presented one very small tubercle, as large as half a pea, just above the place where the coronary artery curves around the base of the auricle. He could not ascertain that there was any hereditary predisposition.

Prof. Clark said that he had seen one case of cancerous matter deposited upon the peritoneum. In that instance it was a small, white, shining, irregular deposit on the surface of the peritoneum, covering the whole of it. There was scarcely the space of a line in width that had not some of that matter upon it; he had now forgotten whether it was primary or secondary, but he believed it was the latter. The tuberculous deposits are almost always connected with a considerable amount of fibrinous effusion, which produces agglutination of the intestines, and, unless seen very early, they will be found so connected. At a very early period they appear transparent, deposited rather under than on the membrane. But there is still another deposit, rarely met with, which might give some explanation. It is that which occurs from inflammatory action, and is caused by the fibrinous matter which, from the friction of the intestines, collects into little nodules, exactly as we see nodules in the spleen. It is possible that this is a case of that rare form of slowly organizing matter. The little tubercles situated under the skin, when not cysts, from which they are easily distinguished, are, in ninety-nine cases out of a hundred, of a cancerous character.

The specimens were then referred to Dr. Clark for examination, and a report at a subsequent meeting.

Heart-Clots. By John Cochran, M.D., Surgeon to the Brooklyn City Hospital.

Dr. Cochran presented specimens removed from a man 32 years of age. This person had been ill more than four years. When he first came under observation, his extremities were œdematous, and the abdomen filled with water. On making a physical examination of the chest, he found the ordinary symptoms of considerable hypertrophy of the heart, complicated, as he thought, with valvular disease on the left side. The urine had a high specific gravity, and threw down a copious deposit of albuminous matter when subjected to the proper tests. The patient gradually grew worse, and at length died. On examining his heart after death, it was found enlarged, but no disease of the aortic valves existed; a polypus six inches long was found extending up the aorta, which he supposed might have produced death. One of the kidneys was healthy; the other presented but little normal structure.

Prof. Clark said that, in regard to the occurrence of these polypoid clots, which have been supposed to exist previous to death, and to have been the cause of the fatal termination of any particular disease, ever since the publication of Dr. Meigs' papers upon the Heart, &c., his attention had been directed to the subject, and he did not remember to have seen, in a single instance, any satisfactory evidence that coagulation of the blood had taken place before death. Such a thing does happen, but it must be of rare occurrence. Dr. Cheeseman had a specimen that was unequivocal; it is now in the museum of the New-York Hospital. The clot formed a sort of rounded ball, which acted like the ball-valve in a syringe, and finally obstructed the circulation completely. He had seen one or two other instances; in one the clot became attached to the pecten muscles of the heart previously to death, as was proved by the fact that the inner portion of it had softened, while the exterior remained firm. He thought it impossible that this change should have occurred after death. In all cases where the evidence had been entirely satisfactory, the coagulum has had a whitish appearance. This case appeared to him like those he had been accustomed to consider mere coagulation of the blood at the heart. The firmness of the clot did not exceed what might be found in any coagulated blood, and it is very common to find the coagulum bound down, and embracing the pecten muscles so as to be firmly attached.

Condition of Muscular Fibres in a Ruptured Heart. By Prof. Clark.

Prof. Clark read a report on the condition of the muscular fibres in a ruptured heart, presented at a previous meeting for Dr. Uhl. The heart at the time of the examination had been removed from the body twelve days; a part of that time it had been kept in diluted alcohol, and for about six days it had been macerating in cold running water. The fibres that had been exposed to the action of water directly, had nearly all lost their striated appearance, and had become markedly granular. But when a new section was made, and the fibres examined from it, they showed the transverse marking very distinctly, and many of the longitudinal striations. They appeared perfectly normal. This was true of both the right and left side, and as demonstrable even in the immediate neighborhood of the rupture as in any other part. There was, besides, nothing of the pale or yellowish color which so often accompanies the granular degeneration of muscular fibre; on the contrary, the tissue had the deep brown healthy color, except where it had been changed by the direct action of the water. It was worthy of notice, however, that on the right side were to be seen numerous adipose cells, grouped irregularly, separating the muscular fibres, but causing no change in their structure. This fact has been often noticed in hearts that are undergoing the adipose degeneration. In this instance the adipose matter was not found among the fibres of the left side, and on that side there was no noticeable encroachment of the adipose upon the muscular tissue. At a later period he examined this same structure, and it seemed that the change in the muscular fibre had advanced considerably, for then the specimen had been lying in the water two weeks more, and there was apparently more degeneration than could be at first seen. He was inclined to the opinion that considerable of this change was owing to maceration in water. *March 9th,* 1853.

Report on the Case of Cancer of the Breast. By Prof. CLARK.

Prof. CLARK reported upon the specimens presented to the Society at the last meeting by Dr. Markoe. He thought the white deposit upon the peitoneum of the intestines, and other abdominal organs, was of a cancerous nature, and if it was cancerous, the structure was such as to place the specimen upon the very border, when cancer becomes blended with, or runs into fibrous deposit. First, the structure was mainly fibrous, the fibres being of the fine, silky variety. The fibres at points separated, leaving meshes which were filled with cells; in some of these meshes there was but one cell, in others there were several. They varied in size from $\frac{1}{100}$ to $\frac{1}{2000}$ of an inch. Over these fibres there was a moderate amount of fatty matter. A few mother cells, that is, cells of more than the usual size, and containing other cells, were floating free in the fluid. Second, the structure was made up of cells of about the size of blood-corpuscles, some of them granular in whole or in part. A number of the cells had one diameter about the same as those last described, and the other diameter from one-half to twice the length of the first. There were also oval cells with clear nuclei. Some of each of these two kinds of cells were found to be elongated into fibres, at one or both extremities. Third, in addition to these, were cells of a much larger size, and most of them granular, or nucleated, their diameter being three times the size of the round ones just referred to. Fourth, there were a few *caudate* cells. All these cells were found to contain fat. This was the appearance of all the small tumors upon the peritoneal surface. On examining the breast, no satisfactory evidence was found, that the degeneration was of a cancerous nature. There was some of the white fibrous and yellow elastic tissue, and round fibres in considerable abundance, that did not exist in the peritoneal specimen; and also several cells were observed, having a diameter of nearly $\frac{1}{800}$ of an inch, some of them appearing as if about to decay, while others had a recent fresh look. Nothing farther was found, with reference to the thick deposits between the peritoneal and mucous surfaces of some parts of the intestine. On submitting the mucous membrane and muscle to microscopical examination, more than the usual quantity of fibrous tissue was found in the rectum, while there was scarcely any remains of the proper muscular structure. In some other portions of the intestines, there was muscular tissue in abundance. The absence of muscular structure in the rectum, was apparently dependent, first upon the increase of fibrous tissue, and second, upon an almost countless number of small cysts ; these cysts varied in appearance in different portions of the intestines. In the rectum, they were mostly rounded, and so placed with reference to the fibres, that the latter separated and surrounded them, and, uniting again, continued on their course. Sometimes three of these cells were lying in apposition, and at other times they were isolated. The cells were all filled with extremely minute granules of very uniform size. There was evidently some change in the muscular structure, because it could not be seen, owing to its being covered with a granular matter of a kind different from that in the cells. In the small intestines, they were almost all elongated, and much smaller in size than those found in the rectum. It seems quite probable, that the serous cysts, which were of a size appreciable to the eye, were the same with the microscopic cysts lying immediately under the peritoneal covering, and extending to the mucous membrane, but greatly developed. He concluded, that, if the deposit upon the peritoneum was cancer, and he thought it must be, then the history of the tumors in the breast would compel us to suppose that they also were cancerous. The examination, however, did not show them to be cancerous, and as they had remained in a shrunken condition for two years, and as no vestige remained that could be considered normal structure, we must infer that there had been a retrograde movement of a malignant disease. The fact that there was no breast structure remaining had an important bearing upon the question of the nature of the disease.

Tumor of the Uterus. By Prof. CLARK.

Prof. CLARK then exhibited a uterus having a tumor as large as an orange on the posterior surface, of the nature of which he was not certain; he thought it was fibrous. It was fairly within the walls of the uterus, and had the appearance of a cancerous tumor, and when under the microscope it looked very much like cancer, yet he thought it not usual for a cancerous tumor to grow as this one did. At first view it might seem to be fatty, but this was not the case; it had a decidedly fibrous structure, but he doubted if it possessed sufficient elements of cancerous disease. The examination under the microscope did not satisfy him that the tumor could be referred exclusively to either form. It had the feeling of contained fluid, and he expected a fluid to escape when it was laid open. The patient had repeated uterine hemorrhages, but the hemorrhage did not come from the tumor; the inner portion of the uterine wall was reflected upon the tumor in such a manner that the latter had no connection with the internal cavity. The fact is worthy of notice, that, though the uterus was the seat of repeated hemorrhage, and had been for six weeks, yet the appearance of the uterine membrane did not account for the discharge of blood from it.

Prof. GILMAN believed, that when tumors like this occupy the uterine wall, and are so near the uterine surface that they project into the cavity of the peritoneum, and are fibrous in their character, they very rarely cause uterine hemorrhage, but when they project into the uterine cavity, even when they are covered with uterine tissue, and much more when not so covered, they are very certain to produce hemorrhage. They are then called polypi of the uterus. The difference in respect to the tendency to bleed seems to depend entirely upon their location; if they are near the mucous membrane, hemorrhage takes place. He had never seen any explanation of this fact that was satisfactory to him, and he was himself unable to offer any explanation. He had seen these fibrous tumors in every stage of development, from their being imbedded in the uterine wall and projecting only one-third of their bulk, and progressively as they projected more and more into the uterine cavity. He had seen them when hemorrhage had been so great as to endanger life, and in one instance to prove fatal. In examining these tumors with the speculum, he had found them paler than the uterine tissue, and he supposed the hemorrhage proceeded from the lining membrane of the uterus, and not from the tumor.

Prof. CLARK remarked, that in this case there was no particular point indicated as the seat of the hemorrhage. The relation existing between polypous and fibrous tumors, to which Dr. Gilman had referred, was, in his opinion, simply this: that they were both composed of the same tissues, but in different proportions. The statement, that the hemorrhage produced by fibrous tumors depends upon its projection into the cavity of the uterus, was not strictly applicable to this case, as almost the entire uterine wall lay upon the anterior surface of the tumor. The common form of uterine polypus is more vascular, and frequently not only contains vessels, but sinuses filled with blood.

Prof. GILMAN thought the truly pediculated polypi were not a particle more vascular, and had no more sinuses in them than those covered by the peritoneum, and projecting into the abdomen. *March 23d*, 1853.

Cancer of the Stomach.—Dr. UHL presented a specimen of cancer of the stomach which occurred in a German, 68 years of age. He was taken a few days before death with slight diarrhœa; on the third day he went to the privy, where he was soon after found in a fainting condition; he continued in this state several hours, and died. On post-mortem examination, two tuberculous cavities were found in the lung, of about the size of a hen's egg. On opening the stomach, this cancer presented itself, extending from one extremity of the organ to the other, but not involving either orifice. The most singular feature in the case was, that the patient had never exhibited any symptoms of cancer whatever; he had only complained of a bad cough, and had emaciated; no cause of the diarrhœa was ascertained, nor had he ever suffered from it before.

Prof. CLARK said it struck him as a curious fact with regard to this specimen, that the mucous membrane seemed to be entire over the disease, the cancerous element being at a little depth below the surface. On the larger protuberances, the epithelium was greatly hypertrophied. The want of symptoms might perhaps be owing to the fact that the cancer was confined to the smaller curvature, and another circumstance which would tend to explain it, was the condition of the pyloric orifice, which was entirely free. Although the disease extended one-half of an inch below it, there was no perceptible constriction of the opening.

Compound Benign Tumors. By Prof. VAN BUREN.

Prof. VAN BUREN presented two specimens of a similar nature, though taken from different individuals. They were benign tumors, but did not belong to any species generally recognized under this class. They had a compound character, the main constituent of the tumors being fat, and the intervening tissue being a material which has generally passed for bone. The first was laid before the Society some time ago by Dr. Finnell, having been removed from a man who died suddenly. It presented a colorless prominence, and on being laid open was found to consist almost entirely of fat; but in the centre was a bone-like mass, constituting about one-fourth part of the entire bulk of the tumor. This mass he had carefully examined, microscopically and otherwise. The other tumor was very much larger, a cast of which was exhibited at the last meeting, by Dr. Lattimore. It was situated over the nates, and was attached simply by the integuments. On laying the tumor open, it was found to present a very unusual appearance; the larger proportion was fat, and intersecting it were streaks of white, hard, fibrous tissue, and in this tissue were masses of irregularly-shaped knobs or bodies which would pass for bone. The whole character of the tumor was marked by the presence of this bone-like material; it became necessary to saw it in laying it open. These tumors presented a great similarity in their composition; in the smaller there was but one mass of bone, and this occupied the centre. To the naked eye it had the appearance of bone, but on close examination it was found to contain phosphate of lime, and on submitting it to the microscope it presented no evidences whatever of bone structure. It appeared to be an amorphous mass of bone salts, without any definite structural arrangement, the phosphate and carbonate of lime being in a state of aggregation or precipitation. The bone-like matter of the larger tumor was of a precisely similar character; and in neither was there the slightest evidence of organization. The most interesting constituent of these tumors was this bone-like material, from the fact that when these concretions have been met with hitherto, they have generally been described as masses of bone, and considered to be ossification of the tissues. This view Dr. Van Buren believed to be entirely incorrect, inasmuch as they are not masses which have undergone ossification, but are merely aggregations of the salts of which bone is partly composed in its normal condition. They are similar to the lamellæ sometimes found beneath the serous coat of arteries. He recollected having found a mass in the substance of a liver which had the same external appearance as the mass in the smaller tumor. He presumed this had the same character as the degeneration which false membrane undergoes, forming bone-like plates on their surfaces, as is sometimes seen about the arachnoid and pleura. He had occasion once to operate upon a man with double hydrocele, in whom one tunica vaginalis had undergone almost entire ossification. It was necessary to extirpate this, and he found there was a material in it resembling bone in every respect, and also a material resembling cartilage, but he did not then know whether this condition was owing to ossification or to some simple concretion of bony constituents. The term *calcification* has been very appropriately applied to these hard, bone-like formations, so frequently met with.

Prof. CLARK remarked, that the occurrence of fatty matter and fibrous structure in the same tumor was of common occurrence, and it has been supposed that cancerous and fatty tumors were combined; but he had no recollection of any tumors of the fatty kind containing elements of bony structure, and he thought that Dr. Van Buren had stated correctly the character of the pseudo-osseous structure. He had himself made exhibitions of similar materials, from other parts of the body, to the Society: for instance, the dura mater, from which a large tumor was taken, projecting into the brain, and at the time it was stated that it did not contain osseous structure. This fact, he believed, was generally recognized. Dr. Walsh named this condition *calcification*, in distinction from true bone structure. The latter, Dr. C. believed, seldom or never occurred, except in the uterus, and occasionally in the scrotum. All the other deposits resembling bone have received the name of calcification. *April 1st*, 1853.

PART SECOND.

CRITICAL ANALYSIS.

ART. IX.—*The Dublin School on the Heart: A Retrospective Review of its Principal Contributions on this Subject for the last Thirty Years.*

1. *Cases of Disease of the Heart.* By DR. ADAMS. Dublin Hosp. Rep. 1827.

(6.) *Patency of the Aortic Valves.* By DR. CORRIGAN. Ed. Med. and Surg. Jour. 1832.

And the following from the Dublin Quarterly Journal of Medical Science:

2. *Observations on Pericarditis.* By MR. MAYNE. 1835.
3. *Contributions to Pathological Anatomy.* By PROF. SMITH. 1836.
4. *Diseases of the Brain dependent on the Heart.* By DR. LAW. 1840.
5. *Certain States of the Heart in Fever.* By DR. HUDSON. 1841.
6. *Functional Derangements of the Heart.* By DR. CORRIGAN. 1841.
7. *Certain Affections of the Heart.* By DR. GRAVES. 1842.
8. *Clinical Researches.* By DR. O'FERRALL. 1843.
9. *Phenomena of the Circulation.* By DR. LEARED. 1852.
10. *Pathology of the Heart, &c.* By DR. McDOWELL. 1852.
(7.) *Clinical Lectures, &c.* By R. J. GRAVES, M.D. Phil. 2d Edit.
11. *A Treatise on Diseases of the Heart.* By O. B. BELLINGHAM. Fannin & Co., Dublin. 1853. Part I. 8vo, pp. 250.
12. *Diseases of the Heart and Aorta.* By WILLIAM STOKES, M.D. Lindsay & Blakiston, Philadelphia. 1854. 8vo, pp. 689.

IF we range through the galleries of Rome, Florence, Paris, or Dresden, we find that from certain marked similarities in grouping, coloring, or shading, artists of different nations or cities are classified in what are termed *Schools.* The genius of a nation or a university may in like manner be read in the portraits of disease. The records of medicine plainly show French taste and enthusiasm, German patience and erudition, and Anglo-Saxon common sense and utility.

Though we mean to be strictly just, yet, speaking of hearts and the pleasant Irish capital, we ought perhaps, in candor, to put the reader on his guard by saying, that we have a little amiable weakness in that direction, and cannot discuss the subject without a slight movement of our own palpitating organ. We rejoice, after years of waiting, to pay a friendly debt. In praising our Dublin friends where it is so justly due, we know we but echo the feelings of hundreds of our medical countrymen, who have enjoyed their contributions or generous hospitalities. Nowhere are Americans so rapturously received even by the very beggars. These patriotic times may not be the best to discharge a debt of gratitude by talking of nationalities; but we belong as physicians to the universal brotherhood of letters, that recognize equally the intelligent and worthy of every land. Besides, we are not discussing the good or evil qualities of Ireland, or its resident or emigrant poor, any more than Donnybrook Fair or St. Kevin's goose. We are simply describing the choice spirits of a naturally select class—the medical writers of the capital.

Many circumstances have latterly combined to elevate the Medical School of Dublin. Something may be due to natural emulation with Edinburgh and London. It is a quiet, beautiful city, with little of the fever of trade. Like Heidelberg, Oxford, or New-Haven, it is specially fitted for study. When the Irish capital lost her parliament, Trinity College remained, like an only child, her darling pride. If her absentee aristocracy forgot their country, she valued more the only nobility we republicans recognize—that of intellect. The heads of the learned professions became the magnates of Dublin society. Her physicians have long been perfect gentlemen. They have risen above the weakness of clap-trap. They have worked like men, and taken no little airs to attract attention.

We once knew a droll backwoods clergyman of the Dean Swift order, who reproved Sabbath-breaking in the sugar season, by closing a sermon on the virtues of the prophet Daniel with the astounding exclamation, "Daniel never boiled sugar on Sunday!" Our praise has a similar double meaning. While momentarily on the stool of censorship, we venture in kindness, a gentle reproof of our worthy combative friends, who either too sensitively claim, or who morbidly grudge, the honors of medical discovery. So we commend the men of Dublin. They have had no speculum, heart, or throat quarrels—no great battles between progressives and conservatives. They have easily and justly decided all questions of ownership in professional thunder. They have needed no such storms and earthquakes to display the shining ore, but have regularly digged for their treasures. In fact, they form in practice that precursor of the millennium, a medical peace society.

They generously quote one another, and we fancy, in this respect, are more liberally eclectic than our English cousins, in giving credit to their French, German, and American neighbors. They are safely and yet earnestly progressive. We like their unpretending, straightforward style. They have a refreshing way, too, of dealing bountifully with facts, and then, in a sort of Hippocratic fashion, summing up with a few aphorisms in the shape of modest inferences.

Lastly, the highest praise we can give this, or any other school, is, that it is eminently *practical.* To cure the patient is more glorious than to spin the most ingenious theory, or make the most beautiful dissection of his diseased body. Etiology, diagnosis, pathology, everything, are with them still auxiliary to treatment. They are not ashamed of details in therapeutics or niceties in diet,—reminding us of the coveted epitaph of one of their noblest, the lamented Graves: "He fed fevers."

We may criticize any individual faults in the future. But to the proofs: two regular treatises on diseases of the heart have just appeared from the Dublin press, by Drs. Stokes and Bellingham, and we deem this a fitting occasion to review these, and to preface them by a few kindred monographs from the same school, as an introduction.

As a matter of convenience, we have commenced with the earliest, giving the date of each in order, and reserving the larger portion of our space for the later publications of Drs. Bellingham and Stokes. Minor papers from the authors quoted, and several others, have been omitted for want of room.

DR. ADAMS *on Diseases of the Heart.* 1827.—This is a capital production of 100 pages, containing a series of well-described cases of pericarditis, hypertrophy, fatty softening and valvular diseases, with their autopsies, and many ingenious and philosophical observations on the mechanism and pathology of cardiac disease. Dr. Adams' paper, it will be seen, was written four years previous to the publication of the first edition of Dr. Hope's work, and many new views, generally attributed to Dr. Hope and later observers, in justice belong to Dr. Adams. His countrymen constantly refer to him with much deference. Dr. Corrigan's first paper will be noticed with the last.

MR. MAYNE *on Pericarditis.* 1835.—Mr. Mayne's monograph is an instructive record of six cases of pericarditis read before a medical society, and reference to five others which were omitted for want of time. They were interspersed with a series of judicious reflections. Out of these eleven cases, *epigastric tenderness* occurred in ten, generally to the left side, and was the most distressing symptom in five instances. Dyspnœa existed in ten, and in one only was very distressing. In ten cases, too, the pulse was rapid in all periods of the disease, rarely below 120, in two it was intermittent, and in all the instances that reached the third stage, it was weak, small, feeble, irregular, and intermittent. His paper appeared soon after Dr. Stokes' upon the friction sounds in pericarditis, and confirmed his views.

PROF. SMITH *on Free Oil in the Blood.* 1836.—The contributions of Prof. Smith in this paper are devoted to "the more remarkable lesions of the heart and great vessels."

The most curious result of these investigations was the discovery in two cases of death from fatty heart, of *free oil in the blood.* The first was that of a lady aged 90, who died suddenly, as was supposed, of debility and old age. On examination, the pericardium was found distended with blood from a small lacerated opening in the anterior part of the left ventricle. The head was loaded with fat; the muscular substance soft, easily broken with the finger, pale yellowish in color, and greasing the scalpel; upon the surface of the blood escaping floated numerous globules of oil. The division of the vena cava gave exit to nearly a tablespoonful of a clear, perfectly transparent, limpid oil, followed by the blood of the vein. Nearly an ounce might have been collected all together. The second case was that of a poor woman aged 70, admitted into Richmond Hospital, who died half an hour after, apparently from exposure and exhaustion. Similar appearances of fatty heart were found, only there was no rupture. "The surface of the blood was thickly covered with globules of limpid oil."

DR. LAW *on the Connection of Cardiac Disease with Softening of the Brain.* 1840.—Of Dr. Law's contributions we can notice only this, showing the effect of cardiac disease in producing cerebral softening, with, apparently, apoplectic symptoms. The previous researches of Legallois, Richerand, Brichteteau, Lallemand, and Rostan are gracefully noticed. The observations of Dr. Law are founded upon four cases of disease of both aortic and mitral valves, causing, in every instance, *obstruction*, in which, on the post-mortem, softening of the brain was discovered.

A fifth case of paralysis and idiocy, and other signs of cerebral disease, in connection with a valvular murmur, with violent cardiac impulse, was partly cured by an accidental burn.

Dr. Law considers that such brains become anæmic from the obstruction of the cardiac disease to the flow of blood, and that, from its consequent impoverished state, softening occurs in the brain, just as mortification occurs from obstructed circulation elsewhere. The treatment pursued was the exhibition of stimulants, such as camphor mixture, Hoffman's anodyne, carbonate of ammonia, and tonics consisting mainly of iron and nux vomica, aided at times by very moderate derivation of a few leeches and small blisters to the neck.

Dr. Hudson *on the Cardiac Indications for Opium in Fever.* 1841.—The contribution of Dr. H. is founded upon the careful analysis of twelve cases of typhus in the epidemic of 1840, in which a series of cautious investigations led him to the conclusion, that precisely the same rule for the exhibition of opiates was necessary in fever, which Dr. Stokes had previously laid down for the use of *wine;* and that feeble or absent impulse, and first sound of the heart, equally demanded opium and wine; while with strong impulse and full sounds of the heart, both were alike injurious, aggravating the cerebral symptoms.

The post-mortem examinations confirmed these views with regard to softening, as, wherever it occurred, these remedies were well borne.

With softening of the heart, too, there was, in the brain, *venous* congestion; while, with the opposite state, it was arterial. These facts, he thinks, explain the benefits of opposite modes of treatment in delirium tremens.

Dr. Corrigan *on Inadequacy of the Aortic Valve.* 1832.—*On Functional Cardiac Derangements.* 1841.—Dr. Corrigan has long ranked in the first class, in his own country and elsewhere, as an original and laborious observer in cardiac disease. We might have added to our list, at the head of this article, a most ingenious, though less practical paper "on the mechanism of the *Bruit de Soufflet,*" published in 1836. But we shall hardly have room to do even passing justice to the two we have selected.

The paper on aortic patency, being one of the earliest special contributions on the subject, was much prized. He divided these aortic valvular imperfections into the following classes:—1. The valves "absorbed in patches," and presenting "holes," through which the blood leaked. 2. Ruptured valves, "flapping back into the ventricle," and allowing the blood to rush back. 3. Valves "curled" or contracted, so that they cannot spread out and fit. 4. Valves separated from each other by dilatation of the orifice itself, so that they are "unable to meet."

We have long been convinced that, except in vigorous plethoric cases of that rare form of disease, pure hypertrophy, without valvular complication—the bleeding and cupping plan (*coup sur coup*) of Bouillaud,* Hope, and others, with much valvular difficulty, was commonly injurious, and that these cases were generally over-treated.

Dr. Corrigan very judiciously remarks:

> In these instances, hypertrophy is recognized as a provision of nature to make the power of the heart equal to the obstacle it has to overcome. The consequence of the neglect of this principle has been that, too often, in the treatment of a valvular alteration of the heart, there has been a constant struggle between nature and medicine. Nature has been making the organ equal to its task, while medicine has been directed to counteract nature's efforts, by weakening the organ to render it totally incapable of its task. The repeated bleedings and starvings, and the enforcement of the debilitating measures, are totally unsuited to the disease we are considering.

He specially condemns, in aortic valvular disease, with hypertrophy, the use of digitalis.

The paper by Dr Corrigan, on "Functional Derangements of the Heart," eleven years later, is equally judicious. Not having then seen Dr. C's. article, in a paper on this subject recently read before the *Society of Statistical Medicine*, and published in this Journal, we took occasion to dwell upon two or three points, under the impression that they were new. We are happy now, in justice, to acknowledge that we had been partially anticipated by this distinguished observer. The chief topics of his paper may be enumerated in his own words, as "functional derangement of the heart in growing persons"; those "dependent on gastric irritability"; "nervous palpitation, indicating permanent patency of the aorta"; "self-audible bruit"; and "epileptic palpitation." On the last topic, his observations, we believe, are quite original, and treat of some of those mild forms of epilepsy, attended with what the French term the *petit mal*, in which the palpitation and irritability of the heart are very troublesome.

It is well known that, among the large consumers of tobacco, the hysterical, bloodless females, and growing or dyspeptic males of our cities, a large proportion of cases of suspected heart-disease are simply functional.

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* *Maladies du Cœur.*

Dr. Corrigan, in his practical discrimination, has laid down several principles in their diagnosis, which have since been amplified by Canstatt* and Hughes.

Dr. Graves' *Clinical Lectures. Paper on Certain Affections of the Heart.*—We have not space to notice the paper on the "Influence of Position on the Pulse," and other contributions from this able and lamented teacher. We are also, accidentally, "just too late" to find in the city a copy of the second edition of his Clinical Lectures, which, we see by the many references of his surviving friends, contains much new matter on heart-disease.

In the first edition, which we have in hand, Dr. G. was one of the first to draw attention to a curious temporary enlargement of the thyroid gland, occurring, commonly, in nervous females, in connection with severe palpitation of the heart, commonly functional, and continuing many months. Dr. G. hints that the *globus hystericus* may depend on this. Sometimes it was accompanied by protrusion and staring of the eyeball. Dr. Stokes quotes his friend Dr. Graves on this subject, and adds in his new work, several illustrative cases. The thyroid enlargement, protrusion of the eyeball, and heart symptoms, generally spontaneously stopped after a year or more.

The paper to which we have above alluded is a capital piece of medical reasoning, based upon the record of six cases of cardiac disease, three of which were rheumatic pericarditis.

In the first of these latter, in addition to the usual signs of cardiac inflammation, there were at first two murmurs at the base and along the aorta; a *sawing, friction sound*, and, secondly, a musical murmur like that from rubbing glass with the moistened finger. On the second day, both merged into a "*leather creak.*" On post-mortem, the valves were healthy, but the pericardium was adherent at the apex, and the rest of the surface was coated with lymph. We had, recently, a similar case of a grating sound at the middle, and a musical sound at the apex, in a rheumatic patient under our care in the New-York Dispensary, which, however, were permanent for weeks.

Dr. G. remarks that, "in some cases of pericarditis, the heart's action becomes increased in strength for many hours before any sign of pericarditis can be detected."

In the fifth case, there was a loud, systolic bellows-murmur, simulating exactly that of aortic obstruction, in which it was found, after death, that the valves were perfectly healthy, and that the murmur depended on some dilatation and calcareous roughening of the ascending aorta.

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* *Handbuch der Medicinischen Klinik.*

The sixth case was interesting from an extraordinary vibratory thrill all over the chest, with a loud bellows-murmur, in a nervous little girl convalescent, which gradually subsided, without leaving any traces of organic disease.

Dr. O'Ferrall *on Mitral Disease.* 1843.—This interesting paper is based upon four anomalous fatal cases of valvular disease, located in the mitral alone complicated with hypertrophy and followed by dropsy, in three of which the usual sawing murmur of mitral regurgitation, heard previously at the apex, *permanently ceased* some time before death. In two of the cases, on post-mortem examination, there was adherent pericardium. In all there was some thickening about the mitral orifice, and the mystery of the temporary cessation of the valvular murmurs was explained by the *shortening* of one of the lamina of the mitral, having produced, so to speak, a *refitting* of the valve during the progress of the disease. After a few clear, practical reflections, he sums up with the following conclusions:

1st. That regurgitant disease of the nutral valve is attended by persistent murmur with the first sound.

2d. That the subsequent disappearance of this murmur does not lessen the value of the sign, nor contradict the diagnosis at the time it was made.

3d. That the order of phenomena here described, in *combination* with the general *symptoms* of the disease, constitutes a rational evidence of the supervention of contraction of the opening to a degree proportioned to the previous shortening of the valve.

4th. That uncomplicated obstruction of the aperture is not necessarily attended with a murmur.

5th. That the general symptoms of disease of the mitral valve are not to be distinguished from those of *softening*, merely by the presence of murmur, as has been asserted by authors.

6th. That the diagnosis can be made only by the observation that a well-marked systolic murmur had *previously* existed in *combination* with the general symptoms of the disease.

Dr. Leared *on the First Sound.* 1852.—Being simply ingeniously theoretical, Dr. L.'s paper requires, in this practical summary, but brief notice. It will probably, however, attract considerable attention in future discussions of the causes of the sounds of the heart.

In repeating the experiments of Williams, Hope and others, he became dissatisfied with their views of the causes of the first sound. By means of a hydraulic apparatus of India rubber, fitted with valves, and worked under water, he found that, by bringing a jet of water in motion against water at rest in the tube, he could produce a good imitation of a *bellows-murmur;* and if he used a more *viscid* fluid, like the blood consisting of molasses and water or gum-water, he could imitate the *first sound of the heart.* Hence, he inferred the latter to be caused to a great extent, by the shock of the column of blood in motion lifting the columns at rest in the aorta and pulmonary artery.

Dr. McDowell *on Dilatation.* 1852.—This instructive, well-written paper is based upon the careful relation of nine selected cases of heart-disease, mainly with excessive dilatation, and, in several instances, unaccompanied by valvular lesions. After many practical reflections upon the individual cases, he arrives at the following general conclusions:

1. Excessive dilatation is a direct and efficient cause of obstruction of the circulation.
2. It contrasts in this respect with hypertrophy, the benefits of which latter condition in valvular disease are often subsequently counteracted by progressive dilatation.
3. Dilatation may exist independently of diseased valves, and may produce general symptoms of obstructive valvular disease, or, when accompanied by softening, it may develop signs which specially indicate mitral contraction.
4. Dilatation may recur as a complication of all forms of valvular disease, modifying their signs, and producing an identity in the final symptoms of dissimilar diseases.
5. Hence, in valvular diseases, not essentially obstructive, when dilatation is superadded, the signs of obstruction become developed. The occurrence of pulmonary apoplexy and other phenomena of an obstructed circulation in aortic patency may thus in general be explained.
6. Atheromatous disease of the aorta causes obstruction from loss of elasticity of the vessel. Enlargement of the part may be thus induced, which, as dilatation becomes established, proves fatal, though the valves of the heart are free from disease.

Dr Bellingham's *Treatise.* 1853.—The work of Dr. B. is founded on the lectures delivered in St. Vincent's Hospital, and partially published some time since in the *Dublin Medical Press* and the *London Medical Gazette.* It is planned to consist of two parts:—First, a careful description of the anatomy, measurement, motion, and sounds of a healthy heart, followed by an account of the physical, general, and secondary or remote signs of cardiac disease. Only the first half, a neat octavo volume of 250 pages before us has yet appeared. The second volume is yet to be published. This last, we are promised, will be "devoted to the individual diseases of the heart, which are arranged according as their seat is the investing membrane, the lining membrane, or the muscular tissue of the heart, followed by a description of functional or inorganic affections of the heart." As the work is yet incomplete, and the portion naturally the most interesting and practical is yet to appear, a very extended or elaborate review at present would perhaps hardly be just. Yet a few samples, some slight foreshadowings of what our readers may expect, may be welcome.

A very learned and extended description is given of the anatomy of the heart; better fitted, some will say, for a cyclopedia than a practical manual.

He gives the following judicious directions as to the mode of *opening the heart:*

> The most simple and convenient method appears to me to be, to commence the incision in the pulmonary artery, carrying it through this vessel into the right ventricle, cutting between the sigmoid valves and continuing it to the apex, keeping close to the septum. A transverse incision, meeting the other about its centre, may then be made in the walls of the right ventricle. The aorta being next separated from the pulmonary artery, a similar incision is to be made through it into the left ventricle and continued to its apex, keeping close to the septum. This incision can then be continued on through the apex upon the posterior surface of the heart. To display the interior of the right auricle, a crucial incision may be made upon its anterior aspect, while the left auricle may be opened upon its posterior aspect, between the orifices of the opposite pulmonary viens.

The above differs but slightly, if memory serves us, from the process of the very dextrous assistants of Rokitansky.

With regard to the size and weight of the heart, he agrees with Bizot and Clendining, that the heart is naturally a trifle larger in the male than the female, averaging at middle age about 8½ ounces in the male; that in health it gradually increases in the male for life, and in females till 50 years, till at the maximum it may gain an ounce or two with age.

Our author has come out with a new theory to account for the sounds of the heart, in place of the more usual explanation given by Hope, Williams, Watson, and others. They believe, as we know, that the first sound, commencing with stretching of the auriclo-ventricular valves, is formed *mainly by the rumbling of muscular contraction*, aided sometimes by the tilting against the ribs, and that the short second sound is formed by the blood *recoiling upon the semilunar valves.* From the anologous sounds produced by an aneurismal sac without any valves, and from valvular murmurs being an exaggeration of the natural sounds by friction, Dr. Bellingham endeavors to prove that both sounds of the heart are produced by the friction of columns of blood.

The blood, compressed by the powerful muscular walls of the heart, during the systole and first sound, through narrow orifices, produces greater friction, and therefore more sound, which, he argues, must be "likewise more prolonged, because sound must be developed during the entire period that the blood is passing from the ventricle into the large arteries." He thinks that the blood falls from the auricles to the ventricles without propulsion, but in a full and rapid stream, and "with sufficient force" to generate the second sound.

The most interesting and practical portions of the volume are those describing the various signs of cardiac disease. We are glad to see a revival of attention to rational symptoms, believing that the recent great emphasis placed on the physical signs has led to some neglect of the former. The chapters on "palpitation," "the varieties presented by the pulse," "the countenance in heart disease," "congestion of the lungs, liver, and brain" and ' 'cardiac dropsy," are excellent. The work is evidently the fruit of much research, and is especially rich in its abundant references to the literature of the subject.

DR. STOKES' *Treatise.* 1854.—The work of Dr. Stokes is, we believe, the most voluminous ever published on the subject, being a large octavo of nearly seven hundred pages, very neatly printed. And we perceive that the Philadelphia publishers have reproduced a perfect fac simile of the Dublin edition, at a reduced price. As this great work is the latest, and, in some respects, the best treatise on this subject we now possess, we shall devote to it our remaining space.

In his preface Dr. S. frankly declares that, "omitting much that is new and interesting, his chief aim is to be practical; to dwell upon the refinements of pathology and diagnosis only, so far as they may be useful in every-day practice"; that, without being warped by any favorite theory, he simply seeks to record the results of clinical observations "for more than a quarter of a century," and the consequent "state of his own mind"; the conclusions which he thinks may be safely arrived at, and the doubts and difficulties he has been unable to solve or remove. The first hundred pages are devoted almost entirely to pericarditis. He divides it into 3 varieties as follows:

FIRST FORM.	SECOND FORM.	THIRD FORM.
Absence of pain or local suffering frequent. No sign of muscular excitement, nor any special character of pulse. No increase of dulness over the heart.	The local and general symptoms more decided though often very trifling. Irregular action of the heart and pulse often more manifest in the advanced periods. Remarkable increase of dulness over the heart.	Local distress often extreme even at the outset. Tumultuous action of the heart. Irregularity of pulse. Dyspnœa. Orthopnœa. Œdematous swellings. Syncope, death.

It is curious how much the heart may be compressed without ceasing to act. A friend of the reviewer, a highly intelligent Spanish physician, mentioned recently the case of a man with extensive effusion, under his care in the hospital at Caraccas, in whom life was feebly sustained some time, by a heart, which, after death, was found flattened like the hand.

Dr. S. quotes a case of his own, in which pericarditis attacked a heart displaced and compressed by pleuritic effusion, "without any injury or disturbance of the action of the organ," and another from Dr. Adams, "of long-continued pressure of the heart, so great as to fold up part of one ventricle, in which the heart endured this effect for a considerable time."

It is well known that Dr. Hope made somewhat of a bug-bear of adherent pericardium as inevitably causing hypertrophy. On this point Dr. S. remarks: "Without denying that a general adhesion may induce hypertrophy and dilatation, experience leads me to doubt that such an effect necessarily or even commonly follows the condition indicated. I have often found the heart in a perfectly natural condition, with the exception of an obliterated pericardium. It was neither hypertrophied nor atrophied." He cites a case of his own, of death from hepatic disease, in which the pericardium had been perfectly adherent from inflammation seven years previous, without any consequent change or disturbance. He further expresses his conviction that it is only where valvular disease accompanies or succeeds pericarditis, that enlargement necessarily follows; and refers to the statement of his friend, Prof. Smith, that he had indeed found atrophy of the heart, often attended with fatty degeneration or ossification, to be nearly as frequent a consequence of adherent pericardium as hypertrophy.

It will be remembered that, although M. Collin, as early as 1824, in a passing reference, stated that the "new leather sound," heard in two or three cases, would "perhaps prove a constant symptom of pericarditis," yet the honor of discovering the other "attrition-murmurs," and first clearly unraveling the whole subject, is now generally conceded, even by his competitors, to be due to Dr. Stokes, in his paper on this subject in the *Dublin Journal*, in 1833. Watson, Latham, and Bouillaud who shortly after unconsciously followed in the same track, in fact, simply confirmed his views by their valuable contributions.

With such high claims as a discoverer in the diagnosis of heart-disease, we are not surprised to find a great deal of interesting matter on this topic in his final elaborate work.

He enumerates, under different heads, as signs of pericarditis: 1.

Sense of friction on touching with the hand; 2. Friction-sounds or attrition-murmurs; 3. Extended dulness over the heart from effusion; 4. Friction-signs attended with or preceded by valvular murmurs; 5. Signs of eccentric pressure analogous to those of empyema; 6. Signs of excitement of the heart; 7. Signs of weakness or paralysis of the heart. These, he asserts, are varied by the state and extent of effused lymph; the existence of fluid; state of organization; obliteration of cavity; repetition of inflammation; air in the pericardium; distension of the stomach; complication with pleurisy; the force and volume of the heart; and, lastly, combination with valvular disease.

Speaking of the modifications of friction-sounds, he remarks:—

> With the exception of the leather-creak sound of Collin, and some of the loudest rasping sounds, the friction phenomena are in general singularly localized, and are not heard beyond the actual region of the heart. In many instances, we find that, on removing the stethoscope but a single inch from the spot where the sound is loud, it totally ceases, though we still hear the ordinary sounds of cardiac pulsation.
>
> As might be expected, we find the most intense friction-sounds under two conditions: one, a great degree of induration of lymph; and the other, a dry state of surface. * * * * *
>
> In other cases, however, the sounds, though distinct, do not convey the idea of so unequal and resisting a surface, but resemble the rubbing together of two sheets of paper or parchment. In such cases the lymph will probably be found of soft consistence. And there is a third class of cases in which the friction-sounds are sometimes so soft, equable, and gentle, as to render it necessary that the patient should hold his breath for a few seconds, in order that we may fully observe them. Two circumstances having the effect of modifying these sounds must be here mentioned: one is the employment of antiphlogistic means, and the other is the trial of pressure over the heart. Nothing, indeed, can be more remarkable than the rapidity with which these signs are altered by the application of leeches over the heart, followed by a blister or a poultice. They change within a few hours even from the loudest rasp with distinct vibration to the hand, into a soft murmur, while the tactile signs disappear.
>
> If, while the stethoscope is applied, we make downward pressure with the ear-piece, we shall often find a notable increase in the loudness and distinctness of the friction-sounds.

The work is full of such close, nice, practical observations; we have room but for here and there a brief sample.

A case is given and two others quoted from Drs. Graves and McDowell, of that rare and interesting phenomenon, *air in the pericardium* in connection with inflammation, and attended with a tympanitic sound of the cracked pot over the heart, large, loud, crepitating, and gurgling, mixed with attrition-sounds.

The influence of flatulent distension of the stomach in giving a *metallic* character to the sounds of pericarditis, as well as those of pneumonia, pleuritis, and bronchitis, is also noticed. He thinks Drs. Watson and Hope have overrated the frequency of valvular murmurs in pericarditis.

As a brief illustration of our author's clear, practical summing-up at the end of each important chapter, we copy the following on the connection of rheumatism with pericarditis:

1. That, though the combination of pericarditis with acute articular rheumatism is common, yet that disease of the heart is more closely related to rheumatic fever than to inflammation of the joints.
2. That the liability to pericarditis is in direct proportion to the violence and duration of the fever.
3. That in apyrexial cases of acute arthritis, the liability to cardiac inflammation is but slight.
4. That pericarditis may be developed at any period of the disease, and even precede arthritis.
5. That every variety and degree of pericarditis may occur in acute rheumatism, from the simple, dry, latent pericarditis, to the worst forms, combined with inflammation of the endocardium and muscular structure."

These statements very closely corroborate the views of Dr. Latham.

While giving a complete summary like the above, we think it a material omission not to state that cardiac inflammation from rheumatism is vastly more frequent in subjects under thirty than in middle or advanced age.

Our author's views of the treatment are admirable. He discountenances indiscriminate general bleeding, especially when a weak impulse or pulse forbid, and quotes Dr. Wood, of Philadelphia, in support of caution. He generally prefers relays of leeches over the heart, with intermediate warm poultices, aided by the prompt administration of calomel in from ten to twenty grain doses at long intervals, as recommended by Dr. Graves.

In the second stage he blisters freely. Digitalis he thinks *useless* in the early inflammatory stage; *beneficial*, sometimes, in the subsequent irritative period; and *dangerous* by encouraging syncope when the heart begins to fail in force. In the latter stage, with feeble pulse, faint or absent first sound, pallor, and œdema, he strongly advises wine and other stimulants, and thinks patients are often lost for want of them.

On the subject of endocarditis, he is comparatively brief. Pure, uncomplicated endocarditis he thinks exceedingly rare, and differs from Dr. Hope in the opinion that pericarditis without endocarditis is much the most common of the two.

Dr. Stokes places the combination and isolation of pericarditis and endocarditis, respectively, in the following order of frequency, commencing with the most numerous:—1. Pericarditis with endocarditis. 2. Pericarditis alone. 3. Endocarditis alone.

The following statistics of Dr. Latham, from Bartholomew's Hospital, give quite a different result from this:

In 90 cases of cardiac inflammation from rheumatism, there were of endocarditis alone, 63; pericarditis alone, 7; endocarditis and pericarditis combined, 11; doubtful, 9.*

After the late startling assertions and statistics of Dr. Taylor in favor of the view that cardiac inflammation was about as frequently connected with Bright's disease as rheumatism, we could have wished for something decisive from such high authority as Dr. Stokes. Only in the relation of two or three cases is albuminuria, without comment, casually mentioned as a symptom. But if there are a few points thus excluded, there are perfect mines of information on others.

On the subject of myocarditis he generally confirms the views of Hasse. Valvular lesions are in the main ably treated. The clear, terse definitions remind us of the style of Skoda, although, in many points, he disagrees with the Vienna professor. He doubts the truth of some of Skoda's nice distinctions in the diagnosis, and especially his statement that, in mitral obstruction, the second sound is accented over the pulmonic valves. The very rare affections of the valves of the right side of the heart naturally receive but brief notice; as Dr. S. justly observes, "in practical medicine we may confine ourselves to the diseases of the mitral and aortic valves." We cannot, however, much as we revere Dr. Stokes, in the honest love of medical truth, quite assent to the proposition, that it is unimportant to distinguish between the latter, and that "the number of cases in which it is desirable to determine the exact seat and nature of the affection is comparatively small."

According to the recent statistics of M. Forget, of Strasbourg, in round numbers, in about one-third of the cases both valves are affected, and the remaining two-thirds are nearly equally divided between the mitral and aortic valves, singly. If there is any difference in the prognosis or treatment from the large number involved, it is decidedly important to distinguish aortic from mitral affections.

Dr. Walshe arranges them in the following order, commencing with the most dangerous: "Mitral regurgitation and constriction, aortic regurgitation, and, last and least serious of all, aortic constriction."†

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* *Lectures.*

† Practical Treatise.

The experience of the reviewer confirms this last statement. We had occasion to discuss the comparative prognosis a few weeks since, in a paper read before the *Society of Statistical Medicine*, in which we reported four cases of aortic disease with hypertrophy, in which the average duration had been some ten years. Usually, mitral disease is much more troublesome and extensive in its complications, involving the lungs, liver, and stomach, and often terminating speedily in dropsy; while purely aortic difficulties may remain stationary, occasionally for years,—may gradually wear the patient out, or complicate only the brain. The treatment is also different. Of course, such rules are liable to numerous exceptions.

Dr. S. has paid a high compliment to the great German authority in these matters, by translating and embodying an extract of some fourteen pages from the *Abhandlung der Perkussion und Auskultation* of Skoda.

Under the head of dilatation, he has given us a very interesting account of the case of his friend, the late Mr. Colles. During the last six years of the life of this eminent surgeon, he was subject, at intervals, to gouty attacks, accompanied with bronchitis, transient dyspnœa, palpitation, and other cardiac symptoms, finally giving rise to sudden enlargement of the liver with temporary suppression of urine, which were repeatedly relieved by mild mercurials, followed by diuretics and rest. During the worst of these paroxysms, "the impulse was feeble, irregular, and rapid, and the organ seemed to impinge over a large surface. So irregular and rapid was the action of the heart, that analysis of the sounds was a matter of great difficulty, the first occasionally resembling the second sound, and *vice versa.* There was no valvular murmur, nor any unusual thrill in the arteries." After some months of tolerable health, the liver was observed to be "permanently enlarged, forming a smooth flat tumor." This tumefaction rapidly increased with each paroxysm. No relief was ever obtained until, by mercury and diuretics, a free action of the kidneys was established. On a post-mortem examination at the generous request of Mr. Colles himself, the heart was found much larger than natural, in a state of "great passive dilatation," the orifices "natural," and the muscular substance loaded with fat, "pale, soft, greasy, and easily ruptured"; "globules of oil floated upon the surface of the blood." The liver "not much enlarged," presented a dull mahogany color, a tumid, swollen aspect, and a rough granular surface. Except the globules of oil floating on the blood after incision, the kidneys were apparently healthy.

Eight other cases of "fatty heart" are minutely recorded. The average age was 61. Of the eight cases, three had the characteristic slow pulse, and three the pseudo-apoplexy; two had rupture, and two free oil in their blood. In the treatment of these cases of weak "fatty heart," he advises the giving up of all luxurious habits; moderate, persevering gymnastic or pedestrian exercise; cold, shower-bath, with frictions; for diet, to eat temperately of lean flesh, avoiding fluids, except water; the use of wine or brandy at meals, and the free resort to these stimulants in attacks of fainting and pseudo-apoplexy.

The description of the more active and pure hypertrophy of the heart not connected with great weakness and dilatation, is rather meagre.

In regard to the treatment of hypertrophy, there are some very judicious observations. With Dr. Latham, he discourages Hope's plan of repeated bleeding, from the arm for fear of anemia; cupping he thinks often objectionable, from the excitement of the operation; but prefers, when necessary, applying small numbers of leeches over the heart, from time to time, stating that, when not pushed too far, they sometimes effect great improvement. He speaks doubtfully of setons and issues, as also of the endermic use of digitalis, as recommended by Bouillaud;* but commends the cautious use of small blisters, and anodyne applications, and the internal exhibition of digitalis or hydrocyanic acid.

One of the most interesting chapters in the book is that devoted to the condition of the heart in typhus fever, comprising nearly a hundred pages. On this subject, it will be remembered, Dr. Stokes was the pioneer many years since. In the present volume, he has minutely recorded no less than thirty-one illustrative cases.

They exhibited in many instances the peculiar sign, first pointed out by Dr. Stokes, as indicating softening of the heart, and the special need of wine and active stimulants in typhus; the *loss of impulse*, even when the patient was turned on the left side, and the *partial or total suppression of the first sound of the heart.* Of these 31 cases, the impulse was feeble or absent in 14; the first sound of the heart obliterated in 5; and feeble in 14 instances.

Out of these 31 cases, 11 died; and in 9 of those fatal, on post-mortem, there was found *softening* of the muscular substance of the heart, usually most decided in the left ventricle, and sometimes confined to that locality.

Dr. Stokes also discovered a group of cases of typhus, mild in character, with little or no petechial eruption *specially liable to relapse;* with no evidences of softening, and little or no necessity for wine; in which a soft systolic *bellows-murmur*, like that in chlorosis, or a prolongation of the first sound, was distinctly heard. Of the above 31 cases, 7 were of this mild "relapsing fever," with the first sound changed to a bellows-murmur, or lengthened.

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* Maladies du Cœur.

In some of the above cases, the heart was over-excited, and had increased impulse, and perhaps, at the same time, a weak pulse. These cases all seemed either injured, or not benefited, by wine. They were generally fatal, and exhibited no appearances of softening.

It is only in the third class, or where the impulse and first sound of the heart are feeble, or obliterated, that he so strongly recommends wine and corresponding stimulants. He thinks *improvement* of these signs after the exhibition of wine, in these grave cases, of much value, as indicating a favorable prognosis.

An interesting chapter is given on displacement of the heart. Among the varieties enumerated, are those from pleuritic effusion, penumothorax, emphysema, cancerous tumor, aneurism, diaphragmatic hernia, tubercular disease, and atrophy of the lung.

As a frequent cause of that rare occurrence, rupture of the walls of the heart, he naturally mentions the fatty softening sometimes found in the cachectic or aged. Rarely, as we know, it has occurred from violence and other causes.

Several cases of rupture of the valves and chordæ tendinæ, are also given. He thinks that angina pectoris is generally connected with organic disease of the heart or arteries; that there is commonly "some form of weakened heart," and that, therefore, *stimulants* are always indicated.

On the subject of functional derangement of the heart, there are many valuable practical observations. But we have already much exceeded our proposed limit, and must close by simply giving his classification. He separately treats of "Increased action in young and growing persons;" "palpitation from derangement of the stomach;" from "hysteria;" from "gout and rheumatism;" and cardiac suffering from the abuse of "tea," and "tobacco." We close Dr. Stokes' volume with the conviction that it is the best of his many learned and practical contributions to medical science, and worthy of his previous high fame; and that, while it does not profess to be a compendious or complete text-book for beginners, it must long remain one of the most valuable works of reference on the subject, in any language.

In conclusion, we may mention, that want of space has prevented us from noticing the contributions of Townsend, Ledwich, Todd, Lees, Houston, McDonell, and others, or the valuable records of the Dublin Pathological Society, illustrative of this important subject.

We fear, indeed, we may have already wearied our readers with this sudden fancy for medical mosaic. If the setting has been unskilful, we have the consolation of believing that the stones are all precious gems. J. W. C.

BIBLIOGRAPHICAL NOTICES.

Art. XI.—*Woman: Her Diseases and Remedies.* A Series of Letters to his Class. By Charles D. Meigs, M.D., Professor of Midwifery, and the Diseases of Women and Children, in the Jefferson Medical College at Philadelphia, &c., &c. Third Edition, revised and enlarged. Philadelphia: Blanchard & Lea, 1854. 8vo., pp. 672.

This is a third and revised edition of Dr. Meigs' Letters on the Diseases of Women. As the merits of this work are very well known in this country, it is necessary for us merely to call attention to the issue of a new edition.

Art. XII.—*The Science and Art of Surgery. Being a Treatise on Surgical Injuries, Diseases, and Operations.* By John Erichsen, Professor of Surgery in University College, &c., &c. Edited by John H. Brinton, M. D. Illustrated by three hundred and eleven engravings on wood. Philadelphia: Blanchard & Lea, 1854. 8vo., pp. 908.

The work of Mr. Erichsen belongs to a class of surgical publications which have become quite popular latterly, and which are at once very readable and instructive. We refer to the system of publishing the lectures which the author may have delivered upon a special subject. To this class belong the recent works of B. Cooper, Skey, Perrie, &c., &c. We have in this volume the lectures which Mr. Erichsen has been accustomed to repeat to the students of University College, London, and we regard it as the best and most complete of all similar works. Every subject is carefully and accurately investigated—first, in regard to the science, and then the art of surgery. No surgical treatise is, therefore, better adapted than this to give satisfaction to the general practitioner. It is very fully illustrated.

Art. XIII.—*Comparative Anatomy.* By C. Th. Von Siebold and H. Stannius. Translated from the German, and Edited, with Notes and Additions recording the recent progress of the science, by Waldo I. Burnett, M.D. Volume I. Boston: Gould & Lincoln, 1854. 8vo., pp. 470.

It gives us great pleasure to call the attention of that class of our readers who devote time to the study of comparative anatomy to this work of Siebold, now reproduced in plain and unexceptionable English by Dr. Burnett. It is a work of great labor, and has been justly esteemed one of the most complete treatises of its kind in any language. The Editor thus notices its distinctive features: "In the text will be found a lucid yet succinct exposition of the anatomical structure of organs, arranged, as far as practicable, under distinct types. The details on which this typical summary is based, are comprised in notes which are as remarkable for their erudition as for their copiousness: indeed, the utmost care has been taken in the literature of the various subjects treated, and the student will here find the most reliable, and, at the same time, the fullest reference to the bibliography of nearly every subject in Comparative Anatomy." The work thus furnishes a complete dictionary of the science, and is invaluable either for careful study or as a book of reference. The additions of Dr. Burnett to the notes and bibliography are extensive and valuable. The mechanical execution of the work is in the best style of the art, and reflects creditably upon the publishers.

ART. XIV.—*Clinical Lectures on Pulmonary Consumption.* By THEOPHILUS THOMPSON, M.D., F.R.S., Physician to the Hospital for Consumption and Diseases of the Chest, London, &c. Philadelphia: Lindsay & Blakiston, 1854. pp. 258.

THIS is a neat edition of the lectures, thirteen in number, which the author delivered at the Brompton Hospital for Consumption, in 1851, and which were published in the *Lancet* for that year. They attracted considerable attention at the time, from the author's investigation of the red streak upon the gums in phthisis. As physician to a large hospital, devoted especially to this single disease, the author has had the most ample opportunities to study Consumption in all its phases, and he seems to have improved his advantages diligently. The work is not a complete treatise on phthisis, but, maintaining the form of lectures, each subject is treated in the discursive but attractive style of clinical teaching, with an ample and appropriate introduction of cases. We shall recur to it again.

ART. XV.—*Handbook of Chemistry, Theoretical, Practical, and Technical.* By F. A. ABEL, Professor of Chemistry at the Royal Military Academy, Woolwich, and C. L. BLOXAM, formerly first Assistant to the Royal College of Chemistry. With a Preface by DR. HOFMANN: and numerous illustrations on wood. Philadelphia: Blanchard & Lea, 1854. 8vo., pp. 681.

WE find this volume, after a careful examination, admirably calculated to smooth the path of the student in every department of chemical analysis. It gives a concise account of general chemistry, as far as it is involved in the operations of the laboratory; as well, also, qualitative and quantitative analysis. It goes forth under the sanction of Prof. Hofmann, and we feel certain will prove a useful guide to the student of chemistry.

PART THIRD.

FOREIGN MEDICAL RETROSPECT.

PRACTICAL MEDICINE.

A Review of Reports on Epidemic Cholera, drawn up at the desire of the Cholera Committee of the Royal College of Physicians. By WM. BALY, M.D., and WM. W. GULL, M.D., 8vo, London. The Report of the Royal College of Physicians has long been anxiously expected by the profession and by the public; and, although it has at last appeared, and although its preparation does infinite credit to the distinguished authors whose names appear upon the title-page, we predict that it will disappoint the expectations of the reader who seeks in it for a solution of his doubts, and a clear indication for his practice. Its style is analytical, and it carefully collects the information derived from various sources, testing the value of theoretical views by appeal to established facts; and when conclusions are drawn at all, they are fairly warranted by the arguments which precede them. So voluminous are the materials of which the authors have made use, and so numerous are the facts and arguments which they have condensed into the present volume, that we feel considerable difficulty in presenting a tolerable analysis of the book in our pages; and, in order to be within limits, our remarks must be, necessarily, discursive.

It must, however, have struck every one who has studied the works written on cholera, or has witnessed the actual progress of the disease, that certain questions stood prominently forward for discussion by the members of the profession, and that the answers to such questions involved points of immense importance, not only to individuals but to whole nations, and to the world itself. For this fearful pestilence has spared neither sex, nor age, nor calling; it has swept off both high and low; the expanse of the ocean has not limited its progress, nor have adverse winds repelled its march or diminished its virulence; and some of the coldest as well as the hottest regions of the globe have suffered alike from its visitation. It is, therefore, of immeasurable interest to the statesman, the philosopher, and the philanthropist, as well as to the practitioner of medicine, to trace, if possible, the hidden springs of so much misery to the human race; to discover the latent poison, and to counteract its influence; or, when it has burst forth in the community, to check its ravages and prevent its propagation.

The questions, then, which require solution, are: the cause of cholera, and the mode of its diffusion; the morbid anatomy and pathology of the disease; and, lastly, its treatment.

In the Report now before us, the two first questions are discussed by Dr. BALY, the three latter by Dr. GULL. In addition to the letter-press, there are numerous laboriously-executed maps, showing the progress of the disease, and its relative mortality at different places and different times; and also copious tables, drawn up as the results of the answers obtained by the Cholera Committee to the circular letters addressed to the profession in the year 1849.

In Dr. Baly's contribution to the volume, on the CAUSE OF CHOLERA and its MODE OF DIFFUSION, he considers first the different theories which have been advanced upon the subject, and then, before treating them in detail, he advances a great variety of facts and arguments to prove the general characters presented by the cholera epidemic.

The first of these characters is, *the unequal and very partial distribution of the epidemic*, which presents a remarkable contrast to epidemic influenza, which has, at one time, involved the whole of Great Britain and all Europe, while cholera fallen severely on comparatively few localities. This latter fact is proved from the statistics of Mr. Farr, who shows that four-fifths of the deaths from cholera in England and Wales during the year 1849 occurred in 134 registration districts, the total number of districts being 623, while there were 85 districts in which no death was caused by cholera.

The second character of a cholera epidemic is, that *the localities especially, and most severely, visited by it, have certain features by which they are distinguished from those other places which entirely escape, or suffer only in a slight degree.* This feature of the disease is, perhaps, better known and more generally admitted than any other; and abundant experience has shown that low-lying districts, in the vicinity of rivers or of the sea, and which are unclean and ill-ventilated, are far more liable to the attacks of the disease, than those places in which the circumstances are reversed. But even to this generally-received law there were several exceptions: for, in the epidemic of 1849, "three sea-ports, Lynn, Deal, and Scarborough, almost entirely escaped, and many large inland towns, certainly crowded, and in a more or less defective sanitary condition, had very few deaths." Again, we are told that Reading, where only seventeen deaths from cholera occured out of a population of about 20,000, is described as "built upon a bog, surrounded by water-meadows, with the Thames on one side, a canal on the other, the atmosphere remarkably humid," and as "by no means in a sanitary condition as to drainage and the like." Stafford, where there were only three deaths from cholera, is said by a local physician to be "very low"; "to have numerous stagnant drains in its immediate neighborhood"; "the river impounded by hills so as to be above the level of the surrounding lands"; "floods frequent and long-continued"; and that "the most favorable conditions for the attack of cholera exist within the town, there being no sewers, much filth on the surface, slaughter-houses, pig-sties, etc."

Reading and Stafford, however, are only exceptions to a general rule; and not only is it found that low-lying and humid districts are more exposed to the disease than lofty and dry situations, but that, even in the same town and the same street, the visit is modified by the elevation of above the soil and other local peculiarities. It is found that in London an inverse relation subsists between the elevation of the soil and the mortality from cholera, is proved by Mr. Farr's statistics; and a table is given in Dr. Baly's Report, showing the relative mortality, in 1849, in 10,000 inhabitants in different districts of the metropolis, lying at different elevations above high-water mark. Thus it is found that in Rotherhithe, where the soil is on a level with the high-water mark, the deaths were 205 in 10,000; while in Hanover-Square, where the soil is forty-nine feet above high-water mark, the deaths were only eight in the same number.

The third character of a cholera epidemic is *its long duration in a country, or even in a town of large size,* a feature in which it again differs from influenza, the duration of which is very short, not exceeding a few weeks in a town, and two or three months in a whole country. Now, as the duration of the epidemic has been found to be uninfluenced by varying states of the atmosphere, it cannot be proved that the winds have brought the disease or that these agents have carried it away, but it seems to linger among the inhabitants of towns and cities by some inherent power of reproduction. Dr. Baly therefore proposes that the explanation of the long continuance of the disease in the localities which it visits, is to be found in the theory of "its dependence on a morbific *matter*, transportable within limits from place to place by the atmosphere, and capable of increase under favorable conditions in the places to which it is conveyed. For there is no difficulty in supposing that such a matter might attach itself to the surface of bodies within these places, so as to remain fixed there and even to increase, as long as the favoring conditions continued, quite independently of subsequent changes in the direction of the wind, or, in other words, of subsequent movements and changes of the great mass of the atmosphere."

The fourth character of cholera is that *the intensity of an epidemic of the disease varies during its continuance in a country or a large city ;* so that *it has periods of little and of great activity, and usually well-marked periods of increase, acme, and decrease.* It is generally found that cholera appears in summer, and attains it greatest intensity in the summer or autumn; but this is by no means universally the case, nor does it appear the severity of the disease is at all in proportion to the elevation of the temperature at any given period; for even when the disease has raged during the summer, its greatest intensity is by no means contemporaneous with the greatest heat. In the fatal year 1849, for instance, the greatest heat was in the month of July, but the disease reached its greatest intensity in the month of September, when the temperature was considerably lower. These facts are well shown in a diagram in the body of the work, in which the exact temperature of each day is shown, as well as the relative amount of cholera prevailing at the same time; but the general rule is not invalidated, that the disease is usually more destructive in the hotter than in the colder months; and it would farther appear that great stillness of the air promotes the spread of the disease, while strong currents have an opposite effect.

A fifth character of the disease is, *that after a certain time it altogether disappears;* a fact which is well known to all who have studied its phenomena, but one for which it is difficult to afford any satisfactory explanation.

The sixth character of the disease which Dr. Baly investigates, is *the manner of its dissemination as regards time; that is to say, the degree in which its appearance, its period of greatest intensity, and its cessation were severally simultaneous in different places.* After a careful examination of the statistics bearing upon these points, the results are found to be that, in 1849, different towns began to be affected in succession, and not simultaneously; and that the towns first affected were generally those which lay on the sea or on rivers, and in which the population was dense and poor, and the habitations crowded, ill-built and ill-ventilated. The facts have shown that the epidemic of 1848–49 was very widely spread over this country within three months after its first appearance, at the end of September, that the increase of the epidemic at the beginning of the summer of 1849 took place in different counties in June, July, and August, and its ultimate cessation in September, October, or November; and that although the sanitary circumstances already adduced were found to influence the persistence of the disease in most cases, yet in numerous exceptional instances, the times of the commencement and of the cessation of the epidemic were not accounted for by site, population, or sanitary conditions. We regret that our space will not permit us to follow Dr. Baly through the voluminous details on which he has founded his opinions, or to record the conflicting and apparently contradictory facts, which, as reporter to the Cholera Committee, he has been called upon to examine, and, if possible, to reconcile with one another.

On the important question of the *contagious* or *non-contagious nature of cholera*, the evidence, as is well known, is hitherto unsatisfactory; but it would appear, on the whole, that the weight of proof leans to the side of the non-contagionists. "Amongst the eighty-four communications" says Dr. Baly, "relative to this topic, there are thirty-two in which the writers either distinctly maintain that the disease is not contagious or infectious, or evidently lean to the adoption of that view, and seven in which the contagious or infectious nature of the disease is asserted in an unqualified manner." Dr. Baly, however, analyses the evidence on both sides with great impartiality, but finally arrives at the conclusion that the contagious nature of cholera is not yet proved. It certainly does not appear that the nurses of the sick, or those who have buried the patients, or the medical men who have made *post-mortem* examinations, have suffered in proportion to the danger which they must have incurred; nor is it proved by facts that the persons who have washed the bedding and foul linen of cholera patients have caught the disease, at any rate, in great numbers. In some hospitals, however, as in St. Thomas's and in King's College, the disease appears to have been communicated to the attendants by the patients; in the former hospital, there were one hundred and forty-seven cholera patients, and three nurses were attacked; in the latter, there were one hundred and twenty-three patients suffering from cholera, and two nurses died of the disease. Admitting, however, that contagion may be proved to a limited extent, "human intercourse" says Dr. Baly, "is certainly only one cause of the propagation of the disease. The general features of the epidemic of 1849, and special facts, also, have afforded satisfactory evidence that some other agent is engaged in its diffusion." Dr. Baly then proceeds to examine and to criticise the opinions of those who have proposed other theories for the propagation of the disease, and he considers first, the question whether the cholera poison is carried by the wind, or whether, as Dr. Snow supposes, it is transmitted from one human being to another by the drinking water. Both of these views are argued at great length, but are finally set aside as unsatisfactory. Dr. Baly considers that the influence of atmospheric currents is chiefly exerted in spreading the disease through the different parts of towns and over limited tracts of country, but that the agency of winds does not sufficiently account for the passage of cholera across the seas. He thinks, indeed, that, unless in very rare instances, the poison is not carried long distances by the winds without the loss of its morbific properties.

All the causes, therefore, assigned for the propagation of cholera are insufficient, when taken singly, to account for the results which are most probably to be explained by a modification and combination of some of the theories hitherto proposed; and as the disease is undoubtedly encouraged by damp and foul air, crowded and ill-ventilated dwellings, and habits of intemperance and personal uncleanness, Dr. Baly concludes his Report by some remarks upon Sanitary and Preventive Measures; but although this part of the work is quite unobjectionable, and embodies some very wholesome instructions, the length of our previous notices and extracts prevents us from doing more than giving them a passing allusion.

A copious Appendix is added to Dr. Baly's Report, giving a vast amount of information, upon many practical details, of the last great cholera visitation. In those places which were severely attacked, as well as in those where the mortality was small, the names of the locality and of the reporter are given, together with the number of deaths, the character of the site and its sanitary condition; in another table, the state of the wind and the mortality from cholera are compared, from observations made in Paris from the 19th of March to the 30th of September, 1849; in another are shown the monthly mortality from cholera, and the average temperature in the corresponding months in several epidemics in several cities and towns; another shows the distribution of cholera and diarrhœa over the Devonshire and Cornwall "Cholera field"; another, its distribution over the infected districts of Worcestershire, Staffordshire, and Shropshire; and another gives abstracts of communications received by the Cholera Committee relative to the sanitary condition and general characters of the localities in which the disease first appeared. In these tables the quantity of details is enormous, the labor involved in their compilation and arrangement is incalculable, and the whole forms an enduring monument to Dr. Baly's patience and industry.

In Dr. GULL's Report upon the Morbid Anatomy, Pathology, and Treatment of Cholera, the reporter commences by stating, in his address to the President of the College of Physicians, that he does not intend to write an essay upon the disease; that the section on Treatment contains little that is positive, and that, as the report was undertaken after the disease had begun to decline, there was no opportunity for original inquiry.

Among the first subjects noticed is the fact of the rise of temperature which has been observed after death in cholera: a circumstance which attracted attention during the epidemic of 1832–33, but which was not supported by accurate thermometrical details. In the cases now recorded, it is proved that the temperature really rose after death; in one case, the temperature in the axilla, ten minutes before death, was 103·1°; five minutes after death it was 104°; in another case, twenty-five minutes after death, the temperature of the uncovered abdomen was 89°, forty-five minutes after death it was 90°, and fifty minutes after death it was 91°.

Another point adverted to is, the existence of muscular contractions after death, which often occur to a great extent and last for a long period.

In the cases of those who died during collapse, the stomach was found pale, and contained fluid of various colors and character; the coats of the small intestines were thickened and pulpy from œdema of the mucous membrane and submucous tissue; the villi were swollen and prominent from œdema; the patches of Peyer were often thickened and prominent from infiltration of serous fluid; the large intestine was more rarely affected with hyperæmia and ecchymosis than the small intestine; the liver was generally diminished in bulk, and its tissue flaccid; the gall-bladder was often distended with dark bile; the kidneys were usually congested; the female generative organs were likewise often congested.

When death occurred during reaction, the mucous membrane of the stomach and small intestines presented few alterations of importance; but the kidneys were frequently enlarged, the structure coarse, and presenting traces of congestion. The morbid appearances are then described in a systematic manner, and the analysis occupies forty-nine pages, detailing, in a series of cases, the sex and age of each patient, the duration of severe symptoms, and the lesions exhibited respectively in the stomach, the small intestines, the large intestines, the solitary and the aggregate intestinal glands, the mesenteric glands, the spleen, the liver, the gall-bladder, the peritonæum, the kidneys and urinary passages, the female sexual organs, the heart, the lungs, the membranes, substances and ventricles of the brain. This part of the Report is a most laborious but useful compilation, and affords an excellent view of the morbid appearances in cholera.

Although certain symptoms have been described by authors as the prodromata of the disease, Dr. Gull thinks that little dependence is to be placed upon them. Those which have been chiefly enumerated are vertigo, headache, giddiness, general *malaise*, muscular fatigue, faintings, cramps, nausea, etc.; but Dr. Gull remarks that many of them arise from mental emotion, and others are not so much premonitory of an attack as the first symptoms of its onset.

With regard to the existence of premonitory diarrhœa, the information conveyed to the reporters is unsatisfactory, one set of answers asserting the frequency of this symptom, and another set denying its uniform or general occurrence.

In answer to the question whether the premonitory diarrhœa was characteristic of the severer disease, Dr. Gull observes, that "the diarrhœa premonitory of the severer symptoms of cholera was often feculent and bilious, and presented no characteristics whereby it could be certainly distinguished from other forms. There were, however, occasionally some subordinate points of slight diagnostic value. The evacuations were generally more profuse and liquid than usual, but otherwise of a natural appearance, often unacompanied by pain, and passed without effort, the painlessness and passiveness giving a false security to the patient. It was not until the nervous system began to be depressed, and the feculent character of the stools was lessened or lost, and they became alkaline, watery, and flocculent, that they were distinctive. On this point, the experience of the profession appears to be uniform, and hence we may draw the following important conclusion:—that during the prevalence of the epidemic, every case of diarrhœa, arising without obvious cause, may be regarded as a probable result of the specific poison."

When the patient has passed through the stage of collapse in cholera, he has other dangers to encounter; and when the system is much enfeebled by the violence of the disease, the reaction is often imperfect, and the recovery doubtful. The hot stage of cholera—the consecutive fever, as it is popularly called—has its peculiar sources of danger. Important pathological conditions are presented by the kidneys. "Not only are these organs, in the first stage, occasionally subject to the cholera-process, but, from the complexity of their circulation, the state of the blood, and the depressed nervous power of the ganglionic system, they slowly recover their function, and, from the persistent congestion, the secreting structures undergo changes similar to those found in acute albuminuria from other causes." The urinary secretion was either entirely suppressed or very scanty, of low specific gravity, and contained albumen. It appears, however, that the lesions of the kidneys in cholera did not lead to permanent changes of structure, and that if the patients recovered, the urine soon ceased to exhibit traces of albumen. We learn, also, from statistics, that the greatest mortality was during the stage of collapse or imperfect reaction, and that not more than one-tenth of the cases perished in the consecutive fever.

Dr. Gull does not attach much importance to the so-called cholera-exanthem, which is not of frequent occurrence; and, when it happens, he regards it as being of subordinate pathological interest, and as closely allied to urticaria febrilis and erythema papulatum.

Although it is generally believed that the weak and diseased members of the community are peculiarly liable to the attacks of the epidemic, such does not appear to be exactly the case, for chronic lesions were rarely found in the bodies of those who died of cholera. In eighty-nine cases of cholera examined by Dr. W. T. Gairdner, the liver presented evidences of chronic diseases but once, the kidneys only in four cases, and the intestines were uniformly free. Of the physicians' patients in five London hospitals, from June 1st to November 1st, 1849, 934 were in St. Bartholomew's, and none were attacked with cholera; 998 in St. Thomas's, and six were attacked; 913 in Guy's, of whom three were attacked; and 640 in St. George's, of whom only one was attacked.

Upon the influence of habits and occupations as predisposing to cholera, the Report gives some interesting details. The most fertile cause which invites the disease is intemperance; and, in the communications forwarded to the College, it is clearly shown how great an effect this vice has in disseminating, and, perhaps, in generating, the cholera poison; not only does it appear that habitual intoxication renders up its votaries as the victims to the pestilence, but even the depression resulting from occasional excess had apparently a marked predisposing influence.

As to the liability of certain professions and occupations to the attacks of the disease, the results of Dr. Guy are quoted, and, from his investigations, it appears that "cholera was least fatal to persons occupied in the learned professions, not excepting general practitioners in medicine. It was in an equally low ratio to undertakers. Footmen and other men-servants appear to have been highly favored, probably from the part of the town in which they are principally employed, and the great care they take of themselves, being, perhaps, less exposed to fatigue, either bodily or mentally, than any other class: hence we are not surprised that, whilst among physicians, surgeons, and general practitioners of medicine, the mortality was 1 to 265, amongst footmen and other men-servants it was but 1 to 1572. Amongst tradesmen there are too many discrepancies to admit of any general deductions. Amongst common laborers the mortality was high, especially to ballast-heavers, coal-porters, and scavengers."

It is found from statistics that the Jews enjoyed a remarkable immunity from the disease—a circumstance which seems to be due to their attention to hygienic rules. "Their houses are cleansed annually, and are not overcrowded. They are, as a class, sober, and in their diet scrupulous. There is no extreme destitution among them, the wealthy classes relieving those in distress. Their Sabbath is rigidly observed as a day of rest."

On the all-important subject of the TREATMENT OF CHOLERA, Dr. Gull's remarks are copious, but the results are unsatisfactory. Among the principal medicines employed was calomel; but Dr. Gull states that it is administered only on empirical grounds, and that there appears to be no argument in favor of its exhibition, either from analogy or from pathology. The absence of bile from the evacuations is merely a subordinate result. Dr. Gull thinks that the beneficial results of the calomel treatment have been overrated by its advocates. This is decidedly our own opinion.

The treatment by calomel, opium, and stimulants, has been termed the "rational" method. The calomel was given to restore the functions of the liver; the opium, to allay irritation and arrest the discharges; and the stimuli, to counteract the depression of the nervous system: but experience did not confirm this theory, and the results were unfavorable. Great expectations were excited by the discovery of chloroform, but its specific efficacy in cholera has not been proved. It sometimes allayed the vomitings and cramps, but did not arrest the progress of the malady.

Quinine, strychnia, arsenic, sesquichloride of iron, nitrate of silver, nitrous acid, chlorine, sulphur, sulphuric acid, have all been tried; and some of them, when used upon rational principles, are most valuable in the treatment of cholera.

The application of heat by means of the hot bath, the vapor bath, and the hot-air bath, appears to be of little value in collapse. Cold affusion has produced results not more satisfactory than those from the hot bath. The "wet sheet," in the milder cases, favored reaction, but, when the disease was severe, it was useless or injurious. "In none of the cases, which were many," says Dr. Gull, "in which we saw it tried, did it produce any good effect."

In a few cases, oxygen was inhaled in the stage of collapse, with asphyxia; and, at the same time, galvanism was employed to stimulate respiration, but no permanently favorable effect was produced by these means in the majority of cases.

The injection of saline matter into the veins was practised in 1832–33, without good results; and the repetition of the experiment in the last epidemic was not more satisfactory. Nevertheless, Dr. Gull considers that this plan deserves a further trial, taking such additional precautions as previous failure has suggested, and as the present state of physiological science may indicate. Dr. Gull gives the following observations on this subject:—"An accurate determination of the amount (of fluid) to be employed at one injection is difficult. This must be arrived at by a consideration of the previous history of the case, and by the effects produced. In general, too, great anxiety has been manifested to witness immediate and striking results; and some have probably fallen victims to a large amount of fluid suddenly thrown into an enfeebled circulatory system, whereby the lungs and brain have become seriously embarrassed. In an adult, probably not more than from forty to sixty ounces should be injected without intermission. The operation may be repeated after a longer or shorter interval, according to the necessities of the case; and this is, for the most part, to be preferred to throwing in double the quantity at once. Cases have terminated successfully where such an amount of injection has been repeated five or six times. Our physiological knowledge of the constitution of the blood shows the importance of the saline fluid being slowly mixed with it, otherwise a serious injury may be inflicted upon its organic constitution. From the data afforded by successful cases, we may conclude that about two to three ounces per minute may be set down as the mean rate."—*Assoc. Med. Jour.*

On a peculiar epidemic Fever, with Scarlet Eruption. By EDWARD GOODEVE, M.D. (*India Annals of Medical Science.*)—A peculiar fever with scarlet eruption prevailed in Calcutta and other parts of Bengal in 1824, and was described by Twining, Mouat, and others. In 1847, a similar fever was seen, and was recorded by Dr. H. Goodeve. The fever now described by Dr. E. Goodeve appeared to be of a similar kind. The symptoms set in suddenly with shivering, and fever, which was generally paroxysmal; each paroxysm lasted from two to fourteen hours, being followed by a remission of variable duration. A bright scarlet eruption rapidly followed the initiatory symptoms, being in six cases visible within twenty-four hours, and in two cases appearing in the first febrile paroxysm. It was first seen on the upper part of the neck, the face up to the scalp, and the upper part of the thorax; it then extended to, but was always fainter in, the upper extremities; it seldom extended to the abdomen or the lower extremities. In color, this eruption varied from bright red to a faint rose hue. It was occasionally slightly papular, and was obliterated on pressure. Its duration varied from forty-eight hours to six days; it was seldom followed by desquamation. The mucous membrane of the mouth and throat, and in some cases of the nose, was involved; there was redness, follicular enlargement, swelling of the tonsils, and sometimes, but rarely, ulceration. There was, occasionally, catarrh and congestion of the bronchial mucous membrane; sometimes there was catarrh of the alimentary mucous membrane; the urine was albuminous in one case.

This fever differed from those previously recorded, in two important particulars: first, in the decided implication of the mucous membrane of the mouth and throat; and secondly, in the almost entire absence of articular symptoms, which, in former epidemics, have been so marked as to lead Dr. Copland to describe this disease in his Dictionary under the term, "Scarlatina rheumatica." Only in one of the twenty-eight cases did these joint symptoms occur.

With respect to the identity of this disease with the European scarlatina, Dr. Goodeve hesitates to draw a conclusion, although he recapitulates the striking symptoms, and observes that they are the same as those which go to make up scarlatina.

The mortality was not great; only one case in twenty-eight was fatal. The treatment was simple.—*Med. Chir. Rev.*

Six Analyses of the Blood in Typhus Fever. By MM. GUENAUD DE MUSSY and RODIER. (*Becquerel and Rodier's Path. Chem.*)—In 1847 M. Henri Guenaud de Mussy and M. Rodier were commissioned by the French Government to enter upon an investigation of the typhus fever, which at this time was committing great ravages in Ireland. The former took charge of the pathological department, the latter was occupied with an analysis of the blood. A complete work on this disease was to have been published, but circumstances have decided otherwise, and it is probable that this work will never see the light; one of us, however, has preserved the analysis of the blood of six patients affected with typhus fever, which we believe we ought to publish here in the hope that they may be of some use in the history of this disease.

Analysis of 1000 *grammes of Blood.*

	1. Man.	2. Man.	3. Man.	4. Man.	5. Woman	6. Woman.
Density of the blood, .	1055·5	1047·0	1050·9	1042·1	1051·2	1041·2
Globules, ...	146·5	113·5	138·1	97·2	126·8	95·6
Solid parts of the serum	75·4	71·1	60·1	72·0	70·0	71·7
Fibrine, ...	2·3	1·2	2·8	3·9	2·5	2·1
Water, ...	755·8	814·2	799·0	826·9	800·7	830·6

Analysis of 1000 *grammes of Serum.*

	1. Man.	2. Man.	3. Man.	4. Man.	5. Woman	6. Woman.
Density of the serum,	1022·1	1021·1	1017·5	1020·0	1024·1	1820·0
Solid parts, ...	91·8	80·8	69·8	80·0	82·6	79·2
Water, ...	908·2	919·2	930·2	920·0	917·4	920·8

It should be observed that these analyses were made previous to the period when the application of the polariscope to the study of albumen would have permitted a more exact appreciation of this latter element.

The following conclusions may be drawn from these grave cases:—

The *density of the blood* is, in general, diminished in a sensible degree.

The *globules* in normal proportion in two of the men have been considerably below the average in two others; they have exhibited corresponding diminutions in one of the women.

These facts being observed, we should examine into these deficiencies in the anterior state, the nature of the food, and particularly the anemic condition which preëxisted, the above modification of the globules not being altogether due to the disease itself.

The *fibrine* was found either in normal proportions or occupying limits inferior to the physiological state or in diminished quantity; this tendency to diminution, therefore, is a fact worthy of notice.

The *density of the serum* is, in general, remarkably diminished; this diminution is, probably, the effect of the diet and the disease combined; it is, however, much more considerable in one case than in the others.—*Med. Chir. Rev.*

On Hydrophobia as it occurred in France in 1852. By M. AMBROISE TARDIEU. In the year 1850, the minister of agriculture and commerce, on the recommendation of the committee of public health, sent a circular to every prefect in France, requesting him to give information regarding any cases of hydrophobia which might occur in his department. A number of reports were in consequence sent in, but as these were in some respects incomplete, a fresh circular was issued, detailing more particularly the manner in which the cases should be recorded. From the information so obtained, M. Tardieu drew up a report regarding the cases which occurred in the years 1850–51, as well as in 1852. As the report for the year 1852 is much more complete than the others, we subjoin an abstract of it.

1. The number of cases of hydrophobia which occurred in France during the year 1852 was 48. These were observed in 14 departments: the department in which the greatest number occurred was that of the Hautes Alpes (in the southeast of France, latitude between 44° and 45°); while the department of Lozère (also in the south, and having the same latitude as the other) came next.

2. With regard to the sex; 36 of the 48 cases were males, 12 females; the proportion in the two preceding years was almost the same.

3. The following table exhibits the ages of the subjects affected with hydrophobia:

Below	5 years,	in 1852,	3	in two former	years,	4	= 7
From	5 to 15	"	16	"	"	14	= 30
"	15 to 20	"	4	"	"	11	= 15
"	20 to 30	"	3	"	"	9	= 12
"	30 to 60	"	17	"	"	37	= 54
"	60 to 70	"	1	"	"	7	= 8
Above 70		"	0	"	"	6	= 6
Not mentioned		"	4	"	"	0	= 4
			48			88	=136

This table shows the incorrectness of the opinion which ascribes the disease to the effects of terror, for it shows that 7 children under five years of age have been attacked.

4. All the cases which occurred in 1852 originated in the bites of dogs, except one, where the bite of a cat was the cause of the disease.

5. The situation of the wounds inflicted by the rabid animals was as follows in 48 cases:—On the face, 13 times; on the upper extremities, 15; on the lower extremities, 12; not mentioned, 8. In two of the cases the disease was communicated by pet dogs which were accustomed to lick their masters' faces, and where excoriated lips were the seat of the inoculation.

6. In 40 out of the 48 cases the date of the inoculation has been observed. It occurred in March, April, and May in 10 cases; in June, July, and August, 16; in September, October, and November, 4; in December, January, and February, 10.

7. It seems a considerable number of individuals who are bitten by rabid animals escape the disease. During 1852 some observations were made on this point, and it appeared that out of 44 persons bitten about the same time 23 only were attacked.

8. The period of inoculation of the disease was exactly noted in 20 cases. It was as follows:—Less than a month in 8 cases: from 1 to 3 months 10; from 3 to 6 months 1; 11 months, 1.

9. The duration of the disease in 20 cases was 2 days in 6 cases; 3 days in 8; 4 days in 5; 6 days in 1.

10. The termination of *confirmed* cases of hydrophobia was constantly fatal. Of the 48 cases, it appears that only 27 came under this category; in the others the effect was merely local. In 12 of these

27 cases no precaution was taken, in 4 no mention is made of this circumstance. In 8 of the remaining 11 cases cauterization was resorted to immediately, in 3 at a late period. Of the 21 individuals who escaped (see ¶ 7) cauterization was energetically performed in 12 cases; the details of the other 9 have been omitted.

11. As to the mode of cauterization employed, the actual cautery was used in all cases but 5, and these were treated by protonitrate of mercury, nitric acid, ammonia or butter of antimony. In Germany it has been proposed to excise the bitten parts and then to wash the wounds with a solution of caustic potash.—*Annales d'Hygèine.*

On the Influence of Belladonna in Counteracting the Poisonous Effects of Opium. By THOMAS ANDERSON, M. D.—Dr. Graves had first suggested that, in continued fever, with protracted pupils and coma, if an agent, administered internally, would occasion dilatation of the pupils, it might also relieve the other symptoms of cerebral derangement. Dr Anderson, acting on this theory, administered large doses of belladonna in two cases of poisoning by opium, which he related as follows:—

"A patient of whom I had charge, and laboring under delirium tremens, having received an overdose of a solution of the muriate of morphia, became comatose. He had taken, in thirty-six hours, two ounces of the solution of the muriate of morphia, and it had been continued by the attendant after sleep was procured. When I saw him he was in profound coma, his breathing was stertorous, amounting to no more than four or five per minute, and his pupils were contracted to mere points. His pulse was excessively weak, and rather slow; it was quite impossible to rouse him. I ordered him, immediately, the following mixture:—Tincture of belladonna, six drachms, in five and a half ounces of water, of which an ounce was to be given every half hour. Three ounces of the mixture were administered with great caution, after which his pupils began to dilate. The six drachms of the tincture of belladonna were taken, and in four and a half hours after the first dose of it was given, the patient was in the following condition:—The coma was entirely gone, respirations were between twenty-two and twenty-five per minute, the pupils were much dilated, the pulse had risen to nearly one hundred and twenty in the minute, and was also increased in strength. His countenance, also, from being cold and pallid, had become much flushed, and the whole body was much warmer. He replied, readily and coherently, to all my questions. He continued to improve for three days after, when, rising suddenly to stool, he fainted, and before the assistance of the nurse could be procured, he was dead.

A fortnight afterwards, a woman about 50, took, at four P.M., two drachms of laudanum, and, at half past five P.M., three drachms more. She was brought to the infirmary at eight P.M. After making vain attempts to rouse her from the coma, by walking her about, &c., the stomach-pump was used at a quarter past eight P.M. By this means her stomach was thoroughly evacuated, but no trace of opium was detected by smell or sight. It had, probably, been all absorbed. A current of electricity was then applied to her hands for nearly ten minutes, but without rousing her. I saw her at a quarter to nine P.M., for the first time, and on being told that she had been poisoned by laudanum, I determined to try the effects of belladonna.

At that time her pupils were contracted to mere points, her respiration was stertorous, ten per minute, the pulse was feeble, and the extremities rather cold. Between nine and half-past nine, I gave her one ounce of tincture of belladonna in three ounces of water, which was all swallowed, but with difficulty. In the course of the next half hour, two drachms more were administered. At eleven P.M., the first alteration on the size of the pupil was observed; the respirations had also then increased to twelve or thirteen in the minute, and the pulse was much stronger. The symptoms continued to improve till two A.M., when all indications of opium poisoning had disappeared. The woman was then sitting up in bed talking to the nurses, with pupils dilated to a little more than their natural size, and still slightly sensible to light. The extremities were quite warm, the pulse about 100, and of good strength.

She gave me a coherent account of her motives for taking the poison, of the amount of money she had spent in purchasing the laudanum, and the names of the druggists where it had been procured. She also replied sensibly to questions about her family, and the ages and occupations of her children. She continued awake till nearly four A.M., after which she slept till nine A.M. In the morning I found her pretty well, her pupils being no more dilated than they were four hours after the first administration of the belladonna. She complained, however, of nausea, but unaccompanied with vomiting. This symptom, along with the dilated pupils, had entirely disappeared in the course of two days. She was kept in the hospital, under observation, for ten days after the accident, at the end of which time she was dismissed, perfectly well. The tincture of belladonna, used in both these cases, was of the strength of four ounces of the leaves to two pints of rectified spirit, and prepared by percolation. Half a drachm is considered a full dose. I have seen dilatation of the pupil produced by a drachm given at once.

The committee on Dr. Anderson's communication reported that they had designed to test Dr. Anderson's views by experiments on animals, but had found, on inquiry, that the animals commonly used for experiments were almost entirely insusceptible of the poisonous action of opium or belladonna. Where the effects were so different from those observed in man, it is obviously impossible to pursue the investigation which they had intended; the committee, therefore, while recognizing that Dr. Anderson's views require more extended observations in order to confirm them, deemed them worthy of the attentive consideration of the Society.—*Edin. Monthly Journal.*

On the Employment of Chloroform in restlessness, following Hemorrhage. By T. E. Beatty, M.D.—I am not aware that the powerful agent, for which we are indebted to Dr. Simpson, has been used by any one in cases of *uterine hemorrhage;* and from the imperfect knowledge hitherto attained of the truly wonderful properties of this medicine, it is not surprising that its application to such cases should have been looked upon as inadmissible by even its most warm supporters. In the case I am about to relate, I was, I may say, compelled to resort to chloroform for assistance, and I am happy to say I did not call in vain. The success was so striking, the result so gratifying, that I did not hesitate to employ it in another and similar case, which occurred since I commenced to put these observations together for publication.

February 14, 1853. I was brought five miles from Dublin to attend a lady who had been under my care in three former confinements while she resided in the city. On my arrival I found the head just passing through the vulva, the labor having been short and easy. The child was soon expelled, and before the placenta came away a very profuse hemorrhage took place. A drachm of ergot of rye was now administered, pressure, &c., of course, was attended to, and the placenta, being found in the vagina, was removed. The hemorrhage continued with great rapidity, notwithstanding very good contraction of the uterus. Vinegar and water, freely applied, seemed unavailing. The ground was covered with snow at the time. I ordered a bucketful to be brought up to the room, and making up balls I passed them into the vagina, and heaped the hips and abdomen with the snow. By these means the hemorrhage was at last arrested, but the patient, a very small, slender woman, was reduced to a very low ebb indeed. The pulse was nearly imperceptible, the breathing distressed and gasping, and the formidable complaint of noises in the ears was urgently made. Fifty drops of laudanum in brandy were given, and in a quarter of an hour, the symptoms growing worse, seventy drops more and large quantities of the brandy were taken. Great exhaustion, great nervous excitement, great desire for sleep, harassed the patient. Repose was indispensable to her safety; opium did not procure it; time was of consequence. It occured to me that if I could tranquillize the nervous system for even a short time, the opium she had taken would come into play and continue the narcotic influence so essential to her life. I fortunately had my chloroform with me, and as she lay tossing from side to side, and calling for air, I applied the chloroform to her nose. She soon became more calm, by degrees the jactitation ceased; she assumed a more composed attitude; and, to my great delight, sleep, quiet and natural, soon came over her. Hot jars were placed to her legs and feet, and finding the sleep so natural, I held the instrument with the chloroform at a distance from her mouth, so as to keep up the action in a faint degree. It was most interesting, and, as may be well imagined, very exciting, to watch the state of the pulse during this time. I was too far off to get any assistance. I had tried an experiment with a powerful agent, but my firm belief was that the new medicine would save her life. With the finger on the pulse while she slept, I waited for the returning wave, sometimes imagining the impulse was greater, again finding it feeble as before. But it did increase in strength, and before she had slept half an hour there was a manifest improvement in the beat. The feet were kept warm, and the sleep was kept up for two hours, at the end of which time she awoke most miraculously refreshed. In fact, I never saw any patient so thoroughly recovered at the end of twenty-four hours as this lady was at the end of two. She rapidly returned to perfect health.

Encouraged by the marked benefit derived from the administration of chloroform in this hitherto forbidden kind of case, I was led to employ it under similar circumstances on the 8th of the present month, (March). A lady was delivered of her third child after a natural, easy labor, and as soon as the placenta came away, a great rush of hemorrhage followed, which continued with great violence for an hour. Ergot and the usual means succeeded in arresting the flow of blood, but she was left in a very exhausted condition. Absence of pulse, prostration, sighing, jactitation, &c., were prominent. Laudanum in doses of fifty drops, repeated in ten minutes, and brandy freely given, failed to procure rest. Indeed, the opium seemed rather to prevent sleep. I now placed a piece of sponge in the bottom of a conical shaped wine-glass, and having moistened it with chloroform, I held the glass over the mouth and nose of the patient. The medicine did not fail to produce its usual soothing effect. Soon the nervous excitement passed away, by degrees the eyelids closed, and healthy natural sleep was induced. This was maintained for two hours, during which the warmth of the body returned, the pulse returned at wrist, and slowly regained strength, and at the end of the time, when she awoke, she said she felt perfectly well and happy. She described the first effects of the chloroform as being most delightful. The peace of mind and soothing of the whole nervous system produced by it, she declared resembled a foretaste of heaven.

Conclusions respecting Injections of Iodine in Ovarian Dropsy. By Professor Simpson.—Within the last year, Dr. Simpson has, subsequently to tapping, injected into dropsical ovarian cysts the tincture of iodine in seven or eight cases. For this purpose he has employed the common tincture of iodine of the Edinburgh Pharmacopeia, undiluted. He has usually thrown into the cysts two or three ounces of the tincture. In some cases he has allowed a portion of the injected fluid to reëscape; in others, has retained the whole of it in the sac of the cyst that was tapped. From these cases he drew the following conclusions:—

1. In none of the cases of ovarian dropsy, treated with iodine injections after tapping, has he yet seen any considerable amount of local pain follow the injection, with one exception; in most instances no pain at all is felt; and in none has constitutional irritation or fever ensued. In the one exceptional case considerable local irritation followed; and the pulse rose to 110; but the same phenomena occurred in the same patient after previous tappings without iodine being used.

2. While the practice seems thus so far perfectly safe in itself, it has by no means proved always as successful, as in hydrocele, in preventing a reaccumulation of the dropsical fluid; for in several instances the effusion into the sac seems to have gone on as rapidly as after a simple tapping without iodine injection.

3. But, in two or three of the cases, the iodine injection appears to have quite arrested, for the time being, the progress of the disease, and to have produced obliteration of the tapped cyst, as there is no sign whatever of any reaccumulation, though several months have now elapsed since the date of the operation.

Lastly. Accumulated experience will be required to point out more precisely the special varieties of ovarian dropsy most likely to benefit from iodine injections, the proper times of operating, the quantities of the tincture to be injected, and other correlative points. Perhaps the want of success in some cases has arisen from an insufficient quantity of iodine being used, and from the whole interior of the cyst not being touched by it. The greatest advantage would of course be expected from it in the rare form of unilocular ovarian cysts. In the common compound cyst, the largest or most preponderating cyst is usually alone opened in paracentesis; and though it were obliterated, it would not necessarily prevent some of the other smaller cysts from afterwards enlarging and developing into the usual aggravated form of the disease.—*Month. Jour. Med.*

Puerperal Convulsions and Albuminuria. By M.M. Depaul and Mascaret. ('L'Union Méd.')—M. Depaul has read an able report upon a vary instructive memoir by M. Mascaret, to the Academie de Medecine, upon this important subject. The author divides the cases of eclampsia into predisposing and occasional. He regards as special predisposing causes, first, labors, the sanguineous and lymphatico-sanguineous temperaments, infiltration of the legs; but he does not consider albuminuria, and in this M. Depaul confirms the views of the author, as an essential cause of the disease. M. Depaul cited three cases of puerperal convulsion, in which no trace of albumen could be discovered in the urine; one which had occurred in his own practice, one recorded by Dr. Leuer, and a third by Professor Dubois. Two additional cases are recorded in M. Mascaret's memoir. M. Depaul again refers to the frequency of albumen in the urine of pregnant women, and the comparative and absolute rarity of convulsions. Out of 41 women in whom the urine was found albuminous, observed by Dr. Blot at the Maternity, only 7 were seized with eclampsia. In order to collect these 41 cases, he examined the urine of 205 women, taken indiscriminately from the wards of the hospital. Further, M. Depaul cites two cases, in which, having examined the urine before labor without finding any albumen present, convulsions broke out, and the urine was found to contain albumen after the second fit in the first case, and after the fourth fit in the other case. M. Depaul also observed that the albumen disappears with remarkable rapidity after delivery, whilst not seldom convulsions only appear some hours or even some days after parturition. The reporters, however, admitted that albuminuria was too frequently observed in the course of gestation, and coincided too frequently with puerperal convulsions, not to render the investigation of the relation of these conditions necessary. M. Depaul observed that the common explanation of albuminuria in pregnant women was not to be found in inflammation of the kidney. In the autopsies he had made, the kidneys were found either perfectly healthy, or simply congested. The true point of departure he believed to be, the modifications that gestation caused in the blood.

On the differential Diagnosis of Hydrocele, and the diseases with which it may be confounded. By R. G. H. Butcher, Esq. (*Dublin Jour. Med. Sci.*)

HERNIA.	HYDROCELE.
Begins above.	Begins below.
Changeable in bulk.	Unchangeable.
Engages ring.	Ring free.
Feeling of weakness.	Feeling of weight.
Can often feel intestines, or omentum.	Can feel nothing.
Testicle at the bottom.	Testicle at back part.
Opaque: in child sometimes transparent.	Often transparent.
Base of tumor above.	Base of tumor below.
Flatulence, dyspepsia.	Bowels not deranged.

VARICOCELE.	HYDROCELE.
Soft, like earth-worms.	Tense, elastic.
Changeable, like hernia.	Unchangeable.
Ring dilated often.	Ring closed.
Testicle distinct.	Testicle indistinct.
Testicle wasted.	Enlarged, if distinguishable.
Tumor whole length of chord.	Tumor at bottom.
Tumor light.	Tumor heavy.

VENEREAL TESTICLE.	HYDROCELE.
Both engaged generally.	One tunica vaginalis generally.
Tumor very heavy.	Tumor not so heavy.
Hard all over.	Hard only at back part.
Size moderate.	Often very large.
No fluctuation; sometimes small quantity of fluid.	Fluctuation.
Tumor slanting.	Tumor perpendicular.
Painful to handling.	Not painful.
Solid contents.	Fluid contents.
Eruption, or sore throat.	None such necessarily.

SCROFULOUS TESTICLE.	HYDROCELE.
Round in form.	Oval in form.
Never very large.	Often very large.
Solid.	Fluctuating.
Heavy.	Light.
Lies at the bottom of the scrotum.	Grows upwards.
Inflames in spots.	Never so.
Suppurates, fungates.	Never suppurates.
Scrofula in other glands.	Not so.

FUNGUS HÆMATODES.	HYDROCELE.
Tumor irregularly hard and soft, hardness predominating in early stages.	Uniformly smooth.
Shape, globular generally.	Oval generally.
Rapid in growth.	Slow in formation.
Painful.	Free from pain.
Opaque.	Transparent.
Elastic.	Fluctuating.
Chord becomes hard and knobby.	Chord sound.
Pains up loins.	No such pains.
Health impaired.	Not so.
Fungates.	Never.

CANCER OF THE TESTICLE.	HYDROCELE.
Hard, knobbed.	Soft, smooth.
Small.	Large.
Round.	Oval.
Painful on handling.	Not so.
No fluctuation.	Fluctuation.
Chord knobby.	Chord soft.
Adheres to scrotum.	Never.
Glands in groin enlarged.	Never engaged.
Shooting pains.	Never (in loins).
Fever peculiar.	No fever.
Fungates.	Never.
Death.	Never.

In hydro-sarcocele the testicle will be found hard, painful, irregular, large at the back part, with some fluctuation in front. Testicle distinguished in hydro-sarcocele, not so in hydrocele generally. Shooting pains on handling the former, not so in the latter. If obscure, the tumor may be tapped, and then the enlargement of the testis will be discovered, and the water small in proportion to the size of the tumor.

On the treatment of Hemorrhoids by the Galvanic Cautery. By Richard Steel, Esq. Having observed that in the recent discussion, at the Medical Society, on the subject of hemorrhoids and the several modes of treatment thereof by excision, ligature, nitric acid, etc., no mention was made of the galvanic cautery, I am induced to communicate the fact that the latter method has been most successfully applied by myself and also by a friend at my suggestion. His case is a peculiarly interesting one, having been previously treated by concentrated nitric acid, and subsequently by the galvanic cautery. It exhibits the great superiority of the latter in several important particulars, and in a more striking manner than any number of cases in which one method only has been employed.

The apparatus which we have used for igniting the coil of platinum wire has been made by myself, and consists of a modification of Wollaston's battery of a dozen pairs, so contrived as to admit of being conveyed from place to place with the certainty of not deranging it; and it is set in action with ease and readiness when required. I had previously used a Grove's battery, which I had by me, but felt it desirable to arrange a battery better suited to be sent to a distance from home, and then found immediately ready for use.

The idea of using this plan of treatment for hemorrhoids was suggested to my mind on learning the satisfactory results of the galvanic cautery, as used by Mr. Marshall, of University College Hospital, for the destruction of morbid growths, also for producing artificial contraction of mucous membrane, especially of that lining the vagina, for the cure of prolapsus uteri. Having repeatedly employed the method so suggested for removing erectile tumors and semimalignant growths, I was struck with the comparative painlessness of the application, and at once conceived the idea of applying it to the treatment of hemorrhoids. I was confirmed in the idea on examining a case requiring an operation, and which presented so large a mass of redundant matter, that I was anxious to avoid, if possible, inflicting the severe pain involved in the repeated use of the acid on the one hand, and the danger of hemorrhage following excision on the other. Here was a diseased mass to be destroyed, and relaxed mucous membrane, producing prolapsus, to be contracted; the loss of substance caused by the actual destruction of diseased tissue primarily, and subsequently by the separation of sloughs, secured the first indication; the contraction of the cicatrices secured the second. The ignited platinum coil being applied more or less deeply, or over a greater or less surface, will produce any amount of destruction of parts or of contraction that may be necessary. The smaller amount of pain and of danger to the patient is such, that I shall in future use it in the treatment of this disease, in preference to any other method with which I am at present acquainted.

Case by Elmes Y. Steel, Esq.

I was consulted about three months ago, by a gentleman, under the following circumstances. For thirteen years he had been suffering from hemorrhoids with prolapsus, in so severe a degree as to be compelled to leave the army, which he did about seven years ago, when he placed himself under treatment in London, without obtaining relief. The malady subsequently became aggravated to the extent of incapacitating him for physical exertion of any kind, such being invariably followed by protrusion attended by extreme suffering and profuse hemorrhage. Deeming his case to be incurable, he had of late taken no other precautionary measures than those dictated by his own experience, for the purpose of alleviating in some degree the extreme suffering whereby too often his life was made a burden to him.

On examination, I found a mass, fully of the size of a cricket ball, consisting of hemorrhoidal tumors, varying in intensity of color and in degree of hardness, but all exquisitely tender to the touch. Having found by experience that the operation by ligature, however modified, was often followed by intense suffering, inducing irritative fever, whereas the application of concentrated nitric acid was always safe, certainly less painful, and frequently quite as successful, I determined upon using the latter method in the first instance.

Accordingly, on the 29th of last November, I applied the acid freely to the more prominent parts of the internal mass, avoiding the outer ring, which I had smeared with oil in the usual way. The pain thus occasioned was severe at the time, and continued for some hours, not altogether subsiding for several days, although not such as to require confinement to bed.

On December 4th, the hemorrhoidal mass somewhat lessened. A second and third application, at intervals of ten days, were followed by similar results; the hemorrhoidal tumors having sensibly yielded to the treatment, but still presenting a formidable appearance.

At this time, the suggestion of the galvanic cautery having been made to me by my cousin, Mr. Richard Steel, and he having supplied me with a battery of his own contrivance for the purpose, I determined upon resorting to it for the further treatment of the case.

On Jan. 18th, I proceeded to touch the more prominent of the remaining tumors with the ignited coil. The pain was comparatively so trifling as to be thought insignificant; and immediately after the return of the gut, my patient walked about the house as if nothing had been done.

On February 8th, the parts which had been touched by the cautery were found to have sloughed away, leaving sulci, which will, I doubt not, on cicatrization becoming complete, have effectually promoted the contraction of all redundant mucous membrane. The cautery was a second time applied with similar results, and so effectually, that the patient can no longer protrude the hemorrhoids sufficiently to admit of external examination. He can now use any exertion, such as lifting heavy weights, without inconvenience; and, for the first time during many years, he has relief from his bowels without pain or hemorrhage. He says that the galvanic cautery is painless in comparison with the nitric acid application; and I can vouch for the fact of its efficacy, as well as for the ease with which it can be applied to any extent that may be required. In a word, I feel assured that it is on every account a most valuable, safe, and convenient application for the removal of hemorrhoidal tumors.—*Assoc. Med. Jour.*

OBITUARY.

Obituary Notice of M. Roux.—This illustrious surgeon is no more. He died of apoplexy, on the 23d of March. M. Roux was professor in the Faculty of Paris, surgeon to the Hotel-Dieu, vice president of the Academy of Sciences (Institut), member of the Imperial Academy of Medicine (of which he was formerly president), member of the Society of Surgery and a great many other learned societies, french and foreign, officer of the Legion of Honor, &c., &c. He was born at Auxerre in 1780, and consequently was 74 years of age at the period of his death. M. Roux went to Paris 1797, where he soon became acquainted with Bichat. From an acquaintance he became Bichat's friend and associate in his labors. During the *concours* of 1802, he contested a hospital place with Dupuytren, who he was destined to meet ever after in his path as an opponent. He was surgeon to

Beaujon Hospital in 1806, and was transferred to *la Charitè* in 1810, where the great Boyer was also surgeon, and whose daughter he afterwards married. Boyer spoke of him as the most dexterous operator of the day. His most brilliant *concours* was in 1812, with Dupuytren again for an adversary; although unsuccessful, he made such an impression on the Faculty, that another chair becoming vacant some years after, it was awarded to him by an unanimous vote. "The ardor and learning" says M. Velpeau, "shown by M. Roux in these public struggles, have never been equalled by anybody." Although M. Roux's writings have not been voluminous, yet he has enriched the literature of his country by some admirable works. It is melancholy to think that he should have been snatched away at a moment when he only required a few months to complete the publication of a work, which is to give to the world, the treasures of an unparalleled surgical practice. But for his twenty-five years war with Dupuytren, how much more would we not have had from his pen? However, a constant struggle for supremacy with so formidable a rival, almost precluded the possibility of his continuing the work of composition.

The funeral of M. Roux took place on the 27th of March. The religious service over his remains was performed in the church of *St. Germain-des-Prés*. M. de Castelnau in his own terse style, says, "The funeral of M. Roux was worthy of his memory." His remains were deposited in the cemetery of *Mont-Parnasse*, where rests the illustrious Lisfranc. Six discourses were pronounced: by Messrs. Velpeau, in the name of the Institut; Malgaigne, in the name of the Faculty of Medicine; F. Dubois, in the name of the Academy of Medicine; Marjolin, in the name of the Society of Surgery; Larrey, in the name of the Military Surgeons, and Duchaussoy, in the name of the Hospital Internes. M. Malgaigne's discourse is an evidence of that wondrous power of intellect which characterizes the great orator. M. Velpeau's discourse was admirable as a true appreciation of his dead colleague's career. I cannot refrain from giving the apostrophe with which he concludes, it is exceedingly touching: "Venerated master, faithful friend, thou hast nothing to fear from the celestial life; thou hast done thy duty toward thy fellow-creatures, thy career has been fully, nobly performed! Thy memory will never perish; thy name, forever honored, will occupy a great and illustrious page in the history of useful, of learned men. From the abode of the elect, God will permit thy great shade occasionally to cast an indulgent look on us; then thou wilt know that among thy former students, there is one who will cherish thy remembrance, and be grateful to thee to his last hour; who, in bidding thee an eternal adieu, leaves thy grave, his heart bursting with tears and sorrow."

PART FOURTH.

AMERICAN MEDICAL RETROSPECT.

Proceedings of the American Medical Association, at its Seventh Annual Meeting, held in St. Louis, Mo., May 2d, 3d, 4th and 5th.

The seventh annual meeting of the American Medical Association was held in Veranda Hall, in this city, on Tuesday, May 2d, 1854. In the absence of the President, Dr. Knight, of New Haven, at 11 o'clock, A.M., the Association was called to order by Dr. Usher Parsons, of Rhode Island, the first Vice-President.

Dr. Jas. R. Washington, on behalf of the Committee of Arrangements, welcomed the delegates, and tendered to them the hospitalities of our citizens, in a neat and appropriate address, which was responded to on the part of the Association by Dr. Parsons.

On the calling of the roll, according to States, about two hundred delegates answered to their names.

The roll being called, the President announced that the Association was organized. He congratulated the Association on the return of their anniversary; and expressed himself much pleased to see so many new delegates.

The report of the Committee on Publications was now read, and laid on the table. The Treasurer's report was also read and referred.

On motion of Dr. White, of New York, a recess of fifteen minutes was now had, to allow the delegates of each State to meet and nominate one of their number to form a Nominating Committee to report permanent officers for the Society.

On reassembling, the following gentlemen were reported as composing the Nominating Committee:

Maine, Dr. Charles Millett. Massachusetts, Dr. D. H. Storer. Connecticut, Dr. P. G. Rockwell. New York, Dr. L P. White. New Jersey, Dr. George R. Chitwood. Pennsylvania, Dr. Rene La Roche. Virginia, Dr. Adam Spitler. Minnesota, Dr. J. H. Murphy. South Carolina, Dr. Thomas G. Prioleau. Illinois. Dr. W. B. Herrick. Alabama, Dr. S. W. Clanton. Louisiana, Dr. E. D. Fenner, Missouri, Dr. Thomas Reyburn. Michigan, Dr. William Brodie. Mississippi, Dr. T J. Grafton. Iowa, Dr. D. Seviter. Tennessee, Dr. J. B Lindsley. Wisconsin, Dr. J. B. Dousman. Kentucky, Dr. Robert J. Breckenridge. Ohio, Dr. O. M. Langdon. Indiana, Dr. W. W. Hitt. United States Navy, Dr. Pinckney.

Leave of absence was granted to the Committee. During their retirement communications were read by the Secretary, Dr. E. S. Lemoine, from Dr. Knight, explaining his absence; from E. L. Bea-

DLE, of New York, tendering his resignation as one of the Secretaries, and others.

Dr. BRAINARD, of Chicago, presented a resolution which provided, that hereafter the meetings of the Association be held alternately in the Northern, Southern, and Western portions of the Union. The resolution gave rise to considerable discussion, and was finally laid on the table.

On motion, adjourned to 3 o'clock, P.M.

Afternoon Session.—On taking the chair, Dr. PARSONS, the senior Vice-President, in the absence of the President, delivered an able and interesting address, which was listened to with interest, and which, no motion, was referred to the Committee on Publication, to form a part of the transactions.

The following letter from a permanent member at Marseilles was read:

MARSEILLES, March 10, 1854.

DR. EDWARD L. BEADLE, Secretary American Med. Association:

Please to state to the American Medical Association, at their meeting in St. Louis, that I have presented to the Imperial Academy of Medicine, at Paris, the sixth volume of their transactions, that it has been received by that distinguished body with much favor, and that it has been referred to a committee for examination and report (M. Velpeau, Chairman).

I have also promised M. De Bois, perpetual Secretary of the Academy, to endeavor to procure for the Academy the five previous volumes, and I feel assured that the Academy would take much pleasure in establishing a correspondence with our American Medical Association.

With great respect, yours truly, JOHN G. ADAMS.

A communication was read from the Medical Association of the city of New York, in reference to the melancholy accident at Norwalk, Conn., which took place immediately after the adjournment of the Association last year, and by which so many of its members came to an untimely end. It was recommended that brief biographical sketches be prepared and published with the Transactions.

The following communication from the New Hampshire Medical Society was read:

At the annual meeting of the New Hampshire Medical Society, holden at Concord, June 1, 1853, the following resolutions were unanimously adopted:

Resolved, That it is the decided opinion of the New Hampshire State Medical Society, that no delegate should be admitted to membership in the American Medical Association, who represents a Medical society which numbers among its members any person or persons who adopt as their system of practice any of the forms of empiricism.

Resolved, That the Secretary of the Society be instructed to transmit a copy of this resolution to the Secretaries of each of the State Medical Societies, and to the Secretaries of the American Medical Association, previous to their next annual meeting.

E. K. WEBSTER,
Secretary N. H. Med. Society.

BOSCAWEN, June, 1853.

DR. GROSS, of Louisville, Kentucky, offered the following resolution:

Resolved, That hereafter it shall be considered disorderly for committees of arrangements of this Association to give costly entertainments.

This resolution gave rise to some discussion. Dr. McPheeters, of St. Louis, moved the following as an amendment:

Resolved, That in future, committees of arrangements be requested to dispense with all costly and extravagant entertainments. This amendment was accepted by the mover, and carried by a large majority.

The Committee on Nominations now made their appearance, and, through their Chairman, Dr. White, of Buffalo, N. Y., recommended the following for permanent officers:

For President—CHARLES A. POPE, M.D., of Missouri.

Vice-Presidents—E. D. FENNER, M.D., of Louisiana; N. S. DAVIS, M.D., of Illinois; WILLIAM T. WRAGG, M.D., of South Carolina; JOHN GREEN, M.D., of Massachusetts.

Secretaries—E. S. LEMOINE, M.D., of Missouri; FRANK WEST, M.D., of Pennsylvania.

Treasurer.—D. F. CONDIE, M.D., of Pennsylvania.

The report was accepted, and the officers elected to fill their several stations. Dr. Storer, of Boston. Dr. White, of Buffalo, Dr. Brainard, of Chicago, and Dr. Reed, of Tennessee, were appointed a committee to conduct the newly-appointed officers to their seats on the platform.

Dr. POPE not being present, owing to sickness in his family, Dr. Fenner, the first Vice-President, took the chair, and returned thanks for the honor conferred on him by selecting him as one of the Vice-Presidents, in a few appropriate remarks.

Dr. BIDDLE, of Philadelphia, extended an invitation from the profession of that city to the Association to hold the next annual meeting in Philadelphia.

A resolution of the Detroit Medical Society was also presented by one of the delegates from Michigan, inviting the Association to hold its next meeting in Detroit.

The report of Dr. CONDIE, Chairman of the Committee of Publication, was read; the report closed with a series of resolutions, for the consideration of the Association, which provides that a fee of three dollars should be required of each member annually, to defray the expense of publishing the Transactions of the Association, and that the name of any member refusing or neglecting to pay the same should be erased from the list of permanent members. A spirited debate sprung up on these resolutions, and after being amended, so as to require that permanent members should be notified by the Secretary of their indebtedness before their names were stricken from the list, they were adopted without opposition.

Dr. ATLEE, on behalf of the committee to procure a stone with a suitable inscription for the monument of Washington, reported that he had adopted, at the suggestion of the lamented Dr. Pierson, of Salem, the design for the stone, representing HIPPOCRATES refusing the presents of King Artaxerxes, who invited him to go to Persia and succor the enemies of Greece. The sculpture was on beautiful marble, by *Samuel Beck*, a young artist of Lancaster county, Pennsylvania, from a daguerreotype copy of *Viardot's* celebrated picture, presented to him by Miss ABBY L. PIERSON. The execution of the work is in the highest style of art, and evinces extraordinary talents in the artist. He also stated, that in order to complete the work, $400 in addition to what had already been received would be required, and those favorable to the undertaking were invited to come forward and contribute.

Dr. CHARLES HOOKER, of Conn., was appointed Treasurer *pro tem.*, Dr. CONDIE, the Treasurer, being absent.

Dr. POPE, the President elect, appearing in the Association, was conducted to the Chair, and on taking his seat returned thanks for the honor conferred on him in the following address:

Gentlemen:—There are occasions when the mouth is dumb, because the heart is full. I am unequal to the task of thanks. Honor, which is valuable according to its source, is in the present case great indeed; for I behold around me the members of a noble profession, the cultivators of a yet nobler science, gathered from the wide extent of our beloved country.

I would that this undeserved and unexpected honor had fallen on an older and worthier than I, for many such I see before me. In one thing only will I claim equality: for, however unworthy in other respects, I yield to none in ardent devotion and ceaseless love to our time-honored art. But I would not claim more than I ought. Nor do I misconstrue the honor, which your partiality has conferred upon me; for well I feel that it was intended less as an individual compliment, than one to the West in general, and to Missouri especially. In this view, gentlemen, for them and for myself, I return you the warm unfeigned thanks of a grateful heart.

Relying on the partiality which has thus elevated me to my present position, and claiming indulgence for any short-comings in presiding over your deliberations, I shall endeavor to acquit myself to the best of my poor ability.

Again, gentlemen, I thank you.

Dr. N. PINCKNEY, of the U. S. Navy, was introduced to the meeting, and in behalf of the Medical Staff of the Navy, delivered an eloquent address, expressing in glowing terms the thanks of the medical officers of the navy to the Association for the aid they had rendered them in obtaining from Congress the assimilated rank they desired.

A communication was received from the Hon. L. M. KENNETT, inviting all the members of the Association and the Faculty of the city in general, to partake of the hospitalities of his house, in an entertainment to be given in the evening. A similar invitation was also extended by Drs. Moore, McPheeters, and Reyburn.

A communication was also read from the President of the Board having charge of the Institution of the Blind, of St. Louis, inviting the members of the Delegation to visit that Institution during their stay in the city.

After which the Association adjourned until 9 o'clock, Wednesday morning.

Second Day—Wednesday.—The meeting convened as per adjournment at nine o'clock, A.M., Dr. **Pope**, President, in the Chair.

The minutes of the preceding day were read, and after one or two slight amendments, were adopted.

The Chairman of the Committee of Arrangements reported fifteen additional Delegates as having registered their names since yesterday.

The names of several gentlemen of the profession were offered as members by invitation, and were accepted.

A communication from the American Medical Society of Paris, signed by Dr. A. **Hammer**, of St. Louis, and Dr. **Murphy**, of Cincinnati, on the subject of Medical Education, was presented, which communication, after some discussion, was ordered to be laid on the table.

The President announced that the reading and consideration of the annual report of committees would now be in order. The following chairmen of committees submitted abstracts of their reports of the diseases and epidemics committed to their investigation, as appearing in their several sections and districts.

Dr. D. F. **Condie**, of Philadelphia, on the Causes of Tubercular Disease, was not prepared to report, and requested further time.

Dr. **Geo. B Wood**, of Philadelphia, on Diseases of Parasitic Origin, not being present, had sent a verbal request to be discontinued. His request was accordingly granted.

Dr. **John A. Atlee**, of Lancaster, Pa., on Epidemics of New Jersey, Pennsylvania, Delaware, and Maryland, not being prepared to make a full report, requested to be continued on the same committee.

Dr. D. J. **Cain**, of Charleston, S. C., on Epidemics of South Carolina, Florida, Georgia, and Alabama, read an abstract of his report, which was referred to the Committee on Publication.

Dr. W. L. **Sutton**, of Georgetown, Ky., on Epidemics of Tennessee and Kentucky, made a partial report, and asked to be continued, which request was granted.

Dr. **George Mendenhall**, of Cincinnati, Ohio, on the Epidemics of Ohio, Indiana, and Michigan, presented a report for the years 1852 and 1853, of which he read abstracts. The report was referred to the Committee on Publication, with the request to have it published in the proceedings of the present year.

Drs. **Palmer** and **Atlee** each spoke at some length of the great and lasting good that might be accomplished, if all the members of the Association would duly record their individual experience of epidemics, and report all such cases to the Chairman of the Committee.

Dr. R. S Holmes, of St. Louis, Mo., on Epidemic Erysipelas, read an abstract of his report. It was referred to the Committee on Publication.

Dr. E. D. **Fenner**, of New Orleans, on Epidemics of Louisiana, Mississippi, Texas. and Arkansas. He read a comprehensive abstract of his report—dwelling principally on the ravages of the cholera and yellow fever, their causes and means of treatment.

Dr. **Fenner** had not completed his report, and Dr. **McPheeters** offered a resolution, that he be requested to complete his report, and submit it to the Committee on Publication to be published. The resolution was adopted.

Dr. **Mussey**, of Cincinnati, moved a suspension of the regular order of business and that Dr. **Linton**, of St. Louis, be requested to express his views on the pathology of yellow fever, as he understood that he entertained some peculiar views on the subject. This motion was adopted, and Dr. **Linton**, being called for, took the stand, and addressed the Association at some length on the subject referred to.

In the course of his remarks, he advocated the idea that vegetable decomposition was not necessary to the production of the autumnal diseases of this country. He considered yellow fever nothing more than an aggravated type of bilious fever, caused by the retention of hydrocarbonaceous substances in the blood. In other words, the agencies producing yellow fever were *Northern blood* subject to the heat of Southern latitudes.

A motion was made and carried, that Dr. LINTON be requested to draw up the substance of his remarks, to be presented to the Committee on Publication.

Dr. DANIEL BRAINARD, of Chicago, Illinois, on the Constitution and Local Treatment of Carcinoma—requested further time to make a full report.

Dr. N. S. DAVIS, of Chicago, Illinois, on the Influence of Local Circumstances on the Origin and Prevalence of Typhoid Fever, read a brief abstract of his report, which was referred to the Committee on Publication.

Dr. DONALDSON, of Baltimore, on the Present and Prospective value of the Microscope in Disease, in a communication, stated that his report was complete, but he not being present, it was, without reading, referred to the Committee on Publication.

The report of the Committee on Medical Education was received, but owing to its length, its reading was passed over. It was referred to the Committee of Publication.

Dr. POPE, Chairman of the Committee on Prize Essays, reported that nine essays had been submitted to their consideration, of which, one was presented as a voluntary contribution. Many of these essays possessed undoubted merit both in matter and style; but the committee preferred to be governed in their choice by considerations of originality and practical import, and had therefore concluded to award but one prize. The essay selected is entitled, "An Essay on a New Method of Treating ununited Fractures and certain Deformities of the Osseous System."

On breaking the seal of the packet, DANIEL BRAINARD, of Chicago, was announced as the successful compeitor.

Dr. McPHEETERS moved that Professor BRAINARD take the stand and give the Association an abstract of his new mode of treating fractures, &c., which motion was carried, and Professor BRAINARD accordingly came forward, and in an able manner gave the requisite information.

Dr. GUTHRIE, of Tennessee, offered the following resolutions, which were unanimously carried:

Resolved, That in the Secretary of the Treasury's recommendation to Congress to abolish or materially modify the duty on such crude drugs, not produceable in this country, as are used in the laboratories of the country in the manufacture of chemicals, we recognize a wise provision for the further protection of the profession, and the community at large, from impure and sophisticated medicines.

Resolved, That a copy of this resolution be signed by the proper officers of this Association, and transmit the same to the Secretary of the Treasury, and to the Committee on Ways and Means.

Dr. J. B. JOHNSON read a letter from Dr. STEPHEN W. WILLIAMS, asking that certain resolutions which he had offered at the last meeting in New York, in reference to the preparation and publication of memorials of the distinguished dead of the profession in this country, be taken up and acted on. On motion, the resolutions were called up and adopted, and the President authorised to appoint a committee to carry them out.

In conformity with the recommendation of the Committee on Nominations, Philadelphia was fixed on as the place for holding the next meeting of the Association.

Dr. McILVAINE offered the following resolution:

Resolved, That in the opinion of this Association, the practice of Professors reading lectures to their classes, no matter with how much care selected from the musty records of antiquity, is a miserable apology for teaching, is *prima facie* evidence of their inaptness to instruct, and is inimical to medical progress.

It was, on motion, laid on the table.

Dr. FRENCH submitted the following resolution, which was carried:

Resolved, That a committee be appointed to inquire what State or other Society, represented in this Association. are in fellowship with irregular practitioners.

Dr. BLACHFORD, of Troy, read a letter from Dr. A. D. SPORE, stating that he (Dr Spore) had been for some time investigating the subject of Hydrophobia, to ascertain what influence the weather had upon the disease, and in the letter he requested that communications on the subject might be sent to him by members of the Faculty who had opportunities of making observations. Dr. SPORE not being a Delegate, it was moved Dr. BLACHFORD be appointed Chairman of a Committee for the investigation of this subject.

The following resolution wes offered by Dr. McDOWELL:

Resolved, That a committee be appointed to investigate the improvements of the instruments for Lithotomy, by NATHAN R. SMITH, PAUL F. EVE and Dr. McDOWELL.

The resolution was laid on the table.

The following was offered by Dr. S. M. SMITH, of Columbus, Ohio, which was carried:

Resolved, That a Standing Committee of ——— be appointed by the Association on the subject of Insanity as it prevails in this country, including its *causation*, hereditary transmission, educational influences, physical and moral, social and political institutions, &c. *Its forms and complications*, *curability*, and means of cure and prevention.

Adjourned until three o'clock, P.M.

Afternoon Session.—The Association met as per adjournment.

Dr. WHITE, of the University of Buffalo, submitted the following resolution, which was carried:

Resolved, That the thanks of this Association be presented to Dr. J. KNIGHT, late President, for the very dignified, courteous and efficient manner in which he presided over its deliberations, and that he be respectfully requested to furnish the usual address for publication.

The committee appointed by the American Medical Association to devise or consider some comprehensive plan for the more general, systematic, and thorough investigation of subjects connected with medical science, made a report, to which was appended the following resolution:

Resolved, That the American Medical Association hereby recommends all Medical Societies to establish, in accordance with the plan detailed in the foregoing report, special committees for the selection. investigation, collaboration, and publication, of all subjects of interest connected with medical science.

The resolution was carried, and the report and resolution was referred to the Committee of Publication.

Dr. ATLEE communicated to the meeting that he had received a letter from Dr. PARISH, Chairman of the Committee on Epidemics of New Jersey, stating that his report was yet unfinished, but would soon be ready for publication.

On motion, it was directed to be handed over to the Committee of Publication, when finished.

Mr. DAVIS presented some specimens of milk to the Association, which he explained would, if used, prevent many of the diseases to which children are subject, arising from using impure milk. He respectfully submitted the specimens to the consideration of the Association.

According to previous arrangement, the Association adjourned at four o'clock, P.M., in order to afford the members an opportunity to visit the country residence of Col. John O'Fallon by special invitation.

Third day, Thursday.—Association met at nine o'clock, A.M., Dr. POPE, President, in the chair.

After the reading of the minutes, six additional Delegates were reported as having been registered since yesterday.

The names of several were reported as members by invitation.

Dr. ATLEE offered the following resolution, which was carried:

Resolved, That it shall be the duty of the Publication Committee to append to each volume of the Transactions hereafter published, a copy of the Constitution of the Association.

The following resolution, offered by Dr. GROSS, was also carried, and Dr. Gross was appointed by the chair, the committee designated.

Resolved, That a committee of one be appointed by the chair to inquire into the causes which obstruct the formation and establishment of our National Medical Literature, and to report the subject at the next annual meeting of this Association, or as soon thereafter as practicable.

Dr. J. BERRIEN LINDSLEY offered the following resolution, which, on motion, was referred to the Committee on Medical Education, with instructions to report at the next annual meeting of the Association:

Resolved, That this Association earnestly recommend to the few Western schools which still retain the rule of making four years' practice equivalent to one term at College, the abrogation of said rule, as holding out a strong inducement and temptation to young men to enter upon the practice of medicine with little or no preparation.

Dr. PAUL F. EVE, of Nashville, Tenn., submitted a resolution, which, after amendment, as follows, was carried:

Resolved, That a committee of three be appointed by the chair, to report at the next meeting of the Association, the best means for preventing the introduction of disease by emigrants into our country.

The Chair appointed Drs. **Dickson**, **Griscom**, and **E. D. Fenner**, said committee.

Dr. **Linton**, of St. Louis, offered the following, which was also referred to the above-named Committee:

Resolved, That in the opinion of this Association, quarantine establishments afford no protection to States and cities against the invasion of epidemics, such as cholera and yellow fever.

Dr. **Penn** offered a resolution to the following effect:

Resolved. That the members of the Committee of Arrangements, who are not members of the Medical Association, be invited to take seats in this Association, as members by invitation. Carried.

A communication was read from Dr. **Peebles**, Chairman of the Committee on Epidemics of Virginia and North Carolina, requesting to be excused from the Committee. The request was granted.

The following report of the Committee of Nominations was submitted by the Chairman, Dr. **White**:

The Committee on Nominations, in fulfilling the duty imposed upon them, recommend the continuance of several of the special committees previously created, and the appointment of some new ones. They, therefore, submit the following list of chairmen of special committees, with the subjects to them committed:

Dr **Worthington Hooker**, of New Haven, Connecticut, on Epidemics of New England and New York.

Dr. **John L. Atlee**, of Lancaster, Pa., on Epidemics of New Jersey, Pennsylvania, Delaware, and Maryland.

Dr. **D. J. Cain**, of Charleston, S. C., on Epidemics of South Carolina, Florida, Georgia, and Alabama.

Dr. **W. L. Sutton**, of Georgetown, Ky., on Epidemics of Tennessee and Kentucky.

Dr. **Thos. Reyburn**, of St. Louis, Mo., on Epidemics of Missouri, Illinois, Iowa, and Wisconsin.

Dr. **Geo. Mendenhall**, of Cincinnati, Ohio, on Epidemics of Ohio, Indiana, and Michigan.

Dr. **E. D. Fenner**, of New Orleans, La., on Epidemics of Mississippi, Louisiana, Arkansas, and Texas.

Dr. **James Jones**, of New Orleans, La., on the Mutual Relations of Yellow and Bilious Remittent Fever.

Dr. **D. V. Condie**, of Philadelphia, Pennsylvania, on the Causes of Tuberculous Disease.

Dr. **Jos. Leidy**, of Philadelphia, Pa., on Diseases of Parasitic Origin.

Dr. **A. P Merrill**, of Memphis, Tenn., on the Physiological Peculiarities and Diseases of Negroes.

Dr. **Jos. N. McDowell**, of St. Louis, Mo., on Statistics of the Operation for the Removal of Stone in the Bladder.

Dr. **F. P. Porcher**, of Charleston, S. C., on the Toxicological and Medicinal Properties of our Cryptogamic Plants.

Dr. **Daniel Brainard**, of Chicago, Illinois, on the Constitutional and Local Treatment of Carcinoma.

Dr. **Geo. Englemann**, of St. Louis, Mo., on the Influence of Geological Formations on the Character of Disease.

Dr. **Henry Taylor**, of Mount Clemens, Mich., on Dysentery.

Dr. **Horace Green**, of New York, on the Use and Effect of Applications of Nitrate of Silver to the Throat in Local or General Disease.

Dr. **P. C. Gooch**, of Richmond, Va., on the Administration of Anæsthetic Agents during Parturition.

Dr. **Chas. Hooker**, of New Haven, Conn., on the Diet of the Sick.

Dr. E. R. Dabney, of Clarksville, Tenn., on certain forms of Eruptive Fevers prevalent in Middle Tennessee.

Dr. Sanford B. Hunt, of New York, on the Hygrometrical State of the Atmosphere in Various Localities, and its Influence on Health.

Dr. Frank H. Hamilton, of Buffalo, New York, on the Frequency of Deformities in Fractures.

Dr. G. S. Walker, of St. Louis, Mo., on Diseases of the Prostate Gland.

Dr. H. A. Johnson, of Chicago, Ill., on the Excretions as an Index to the Organic Changes going on in the System.

Dr. Leroy H. Anderson, of Sumpterville, Ala., on Typhoid Fever and its Complications as it prevails in Alabama.

Dr. W. H. Byford, of Evansville, Ia., on the Pathology and Treatment of Scrofula.

Dr. N. S. Davis, of Chicago, Illinois, on the Nutritive Qualities of Milk, and the influence produced thereon by pregnancy and menstruation in the human female, and by pregnancy in the cow, and also on the question whether there is not some mode by which the nutritive constituents of milk can be preserved in their purity and sweetness, and furnished to the inhabitants of cities in such quantities as to supersede the present defective and often unwholesome method of supply.

Dr. M. M. Pallen, of St. Louis, Mo., on Puerperal Convulsions.

Dr. E. B. Haskens, of Clarksville, Tenn., on the Microscopical Investigation of Malignant Tumors.

Dr. Geo. K. Grant, of Memphis, Tenn., on the Sulphate of Quinia as a Remedial Agent in the Treatment of Fevers.

Dr. R. R. McIlvain, of Cincinnati, Ohio, on the Study of Pathology at the Bedside.

Dr. E. S. Cooper, of Peoria, Ill., on Orthopædic Surgery.

Dr. Andrew F. Jeter, of Palmyra, Mo., on the Modus Operandi of the Envenomed Secretions of Healthy Animals.

Dr. Samuel M. Smith, of Columbus, Ohio, on Insanity.

Dr. Rene La Roche, of Philadelphia, Penn., on the Jaundice of Yellow Fever in its Diagnostical and Prognostical Relations.

Dr. Charles Q. Chandler, of Rocheport, Mo., on Malignant Periodic Fevers.

Dr. S. B. Chase, of Portland, Maine, on Typhoid Fever in Maine.

Committee on Plans of Organization for State and County Societies.—A. B. Palmer, M.D., Michigan; R. R. McIlvain, M.D., Ohio; D. L. McGugin, M.D., Iowa; E. R. Peaslee, M.D., New Hampshire; Thomas Lipscomb, M.D., Tennessee.

Committee on Medical Literature.—Robert J. Breckenridge, M.D., Kentucky, Chairman; A. A. Gould, M.D., Mass.; D. L. McGugin, M.D., Iowa; J. B. Flint, M.D., Ky.; O. M. Langdon, M.D., Ohio.

Committee on Medical Education.—Wm. H. Anderson, M.D., Alabama; A. Lopez, M.D., do.; Andrew Murray, M.D., Michigan; A. Ramsay, M.D., Tenn.; R. D Ross, M.D.

Committee on Prize Essays.—Rene La Roche, M.D., Pennsylvania; Isaac Hays, M.D., do; Alfred Stille, M.D., do; J. B. Biddle, M.D., do.; Geo. W. Norris, M.D., do; Joseph Carson, M.D., do.; Joseph Leidy, M.D., do.

Committee of Arrangements—Isaac Hays, M.D., Pennsylvania; G. Emerson, M.D., do.; Wilson Jewell, M.D., do.; Alfred Stille, M.D., do; Francis West, M.D., do.; Wm. V. Keating, M.D., do.

Committee on Publication.—Pliny Earle, M.D., New York; D. Francis Condie, M.D., Pennsylvania; E. S. Lemoine, M.D., Missouri; A. March, M D., New York; E. H. Davis, M.D., do.; C. R. Gilman, M.D., do.

Dr. Reyburn, of St. Louis, moved the acceptance and adoption of the Report, except so far as related to the Committee of Publication.

This motion gave rise to a lengthy and spirited debate. The question at issue was, whether the publication of the Transactions of the

Association should be removed from Philadelphia to New York. The committee reported in favor of the latter city, and the object of Dr. Reyburn's motion was to continue the publication in Philadelphia. Pending the discussion of this question, the Association adjourned until 3 o'clock, P.M.

Afternoon Session.—The Association met agreeable to adjournment, Dr. POPE, President, in the chair.

On motion, Dr. W. S. MAUS, of Pekin, Illinois, was unanimously elected a permanent member.

Dr. ATLEE offered the following resolution, which was carried:

Resolved, That this Association earnestly recommend to their medical brethren, in those States in which Societies do not exist, the immediate organization of State and County Medical Societies.

Dr. PHELPS, of New York, read a long and able paper on the connection between Religion and Medicine, which, on motion, was referred to a special committee, consisting of Drs. Atlee, Sayre, and Marsh.

The unfinished business of the morning being in order, the question came up upon adopting the original report of the Committee on Nominations. A discussion arose, participated in by Drs. BRECKENRIDGE, ATLEE, SAYRE, STORER, McDOWELL, WHITE, and others. It was, in character, much the same as that of the morning, becoming very animated, and at times personal feeling and sectional jealousy were evinced.

The original report of the Committee was at length adopted, which gave to New York the Chairman and a majority of the Committee of Publication.

After the vote was announced, the delegation from Philadelphia, through Dr. LA ROCHE, announced that they would take the responsibility of tendering the resignation of Dr. CONDIE, of Philadelphia, Treasurer of the Association. After some little discussion, the resignation of Dr. Condie was accepted.

Dr. WEST, of Philadelphia, one of the Secretaries, then tendered his resignation, and the question being upon accepting it, it was lost.

Dr. BRECKENRIDGE, of Kentucky, then offered the following resolution, which was carried:

Resolved, That hereafter the majority of the Committee on Publication shall be selected from the Physicians of that city in which the Association may annually meet.

A vote of thanks was then unanimously returned to Dr. CONDIE for the able, zealous, and impartial manner with which he had discharged his duties as Treasurer.

A resolution was reported to amend the Constitution, which provides that its annual meetings shall be held on the first Monday in May, and substitute the second Monday. The resolution, under the rule, lies over for a year.

Dr. EDGAR offered a resolution in regard to the compounding of medicine, and recommending apothecaries to use different colored paper in putting up poisonous drugs, with an appropriate stamp upon it, in contradistinction to other medicines.

Dr. GROSS informed the Association that the second volume of the work of the late Professor DRAKE, of Cincinnati, was now in the press at Philadelphia, and would be issued early in the present summer. The second volume, he said, was on Practical Medicine, and will be entirely independent of the first.

On the recommendation of the Nominating Committee, Dr. ISAAC WOOD, of New York, was elected Treasurer to supply the vacancy occasioned by the resignation of Dr. CONDIE.

On motion of Dr. ATLEE, thanks of the Association were tendered to the Committee of Arrangements, and to the profession and citizens of St. Louis, for the hospitality with which they have been received and entertained.

Dr. MUSSEY, of Cincinnati, was appointed to report at the next meeting, on the Effects of Alcoholic drinks in Health and Disease.

Several other resolutious were presented, and communications read, all of which were referred to committees. Adjourned.

Fourth day, Friday.—The Association met at 9 o'olock, A.M., and, after an informal session, adjourned *sine die.*

After the adjournment, many of the delegates, with their families, joined in an agreeable excursion on the Pacific Railroad, which had been politely tendered to them by the authorities of said road.

Thus closed the seventh, and, to us, an exceedingly pleasant meeting, of the American Medical Association, one which will long be remembered with pride and pleasure by the Profession of this city.

On Thursday evening, a sumptuous entertainment was given to the Association, in the spacious hall of the Mercantile Library Company, by the Physicians of this city. Some six hundred guests sat down.—*Condensed from the St. Louis Med. and Surg. Jour.*

Observations upon Primary and Secondary Amputation. By PROF. W. STONE, M.D., of New Orleans.—The principle of immediate amputation, although beyond all doubt correct, has caused the loss of countless limbs unnecessarily, and, I believe, of as many lives as it has saved. The error, evidently, is from over-estimating the security afforded by primary over secondary amputation. The first duty of the surgeon certainly is to secure, if possible, the life of his patient; and the second, to preserve as much of his person in as perfect a manner as possible. In the anxiety to fulfil the first duty, by over-estimating the security which amputation affords, limbs are often sacrificed that are curable, and by disregarding the proper time for amputation, a life may be lost that would have been safe without an operation. In severe injuries of the extremities, if fatal, death is produced either by the concussion, or subsequent pain and suppuration which exhausts the patient; or it may occasionally be from tetanus or gangrene. Against the first cause of death, amputation affords no security, on the contrary it favors it. The question of amputation before reaction, I believe, is settled by every American surgeon of experience in the negative. This subject was sharply discussed in England on the occasion of the death of the celebrated statesman, Huskisson, who had both legs or thighs crushed on the Liverpool and Manchester Railroad. The Liverpool surgeons attempted to bring on reaction, but every means failed, the concussion had thrown him into a fatal collapse. The London surgeons took the matter up, blamed the Liverpool surgeons, and urged that immediate amputation should have been resorted to, and talked nonsensically of the stimulus of the knife. When one hears such reasoning, he feels the truth of the remark made by some one in the last century, that surgeons were bad pathologists and worse physiologists.

In severe injuries, where the patient is thrown into collapse and amputation is necessary or unavoidable, if the case is critical, it is a nice point to decide when, exactly, it can be performed with the most safety. If the patient were in great agony and amputation could relieve it, there could be no doubt of the propriety of amputating at once, no matter what the state of the pulse might be; but this is not the case, the shock has been received, the mischief has been done, the parts are in a measure paralyzed, and no very severe pain takes place until reaction. The question in such cases is, whether the injured limb is a greater source of pain than the stump would be after amputation, and considerable allowance should be made for the shock of the operation. The discovery of chloroform enables us in a great measure to avoid the shock of the stimulus of the knife, but not entirely. My experience is, that when amputation is unavoidable, it is best to do it as soon as reaction has fairly commenced, while the patient is under the influence of the first shock of the injury, the pulse flickering, etc.; any disturbance of the system, pain or loss of blood, might cause a fatal collapse in a case that would be perfectly safe managed with tact and judgment. By reaction I do not mean a full resistant pulse. The nervous system receives the shock and is the first to react, as is shown by the increased sensibility and improved capillary circulation before any perceptible improvement in the pulse is observed; this, however, soon follows, and the pulse becomes more steady. When the system is suffering from a severe injury, it is often the case that stimulants do not act as such when put upon the stomach. In extreme cases, when the patient is in danger from collapse, it is evident to me that the stomach does not absorb, but is nauseated, and all the depressing effects of nausea are produced. The rectum can scarcely be said to sympathize with the system in general, and always preserves an active absorbing surface. Stimulants given by injection produce a ready effect, and I always use my stimulants in this way where the patient is in danger, even when he is perfectly able to swallow, for they are much more prompt and effective. If too long a time elapses, after an injury, before amputation, the sensibility of the limb, which at first was partially paralyzed, becomes highly exalted, and although we can, by the use of chloroform, prevent the shock from the operation, we have a fresh wound in parts in a morbid state; the stump is much more painful, and as a general rule does not do as well as when the operation is performed earlier. By the above, I mean a state of the parts before any decided inflammatory action has taken place, and my firm conviction is that where no large joints are involved, or parts injured that will give extreme pain to the patient, he will have a better chance for his life if we give him a chance for his limb also, even if we have to resort to secondary amputation; I mean if the most favorable period for operating has passed—*N. O. Med. News.*

Obstinate Quartan successfully treated with Chloride of Sodium. By J. S. Wilson, M. D., of Ala.—Participating in the desire, now so prevalent in the profession, to obtain that great *desideratum*, a cheap and efficient substitute for the costly preparations of Cinchona, in the treatment of Intermittents, I have been induced to try common salt, in accordance with the recommendations of M. Piorry, Professor Dugas, and others. And as the desire alluded to can be consummated only by experiments and reports, to which each should contribute a share, I hope that no apology is necessary for reporting even a single case, especially when its interest is somewhat enhanced by an obstinacy which defied the more ordinary and established remedies.

Case. On the 24th March, I was requested to prescribe for G. W., a young man of sanguine temperament, and of sound constitution, naturally; but this had been impaired by frequent attacks of intermittent fever, which had produced, as usual, a pale cheek, and tumid spleen; these effects were accompanied by headache, mental and corporeal torpor, together with that indescribable sense of general indisposition characteristic of this abominable disease. And, as an evidence of the severity of the paroxysms, it may be added, that the last mentioned symptoms were persistent, continuing, more or less, on his "well days." He stated that several physicians had prescribed for him—that they had given him opium, and (perhaps) quinine, &c. &c., without "breaking them;" and I had, myself, several weeks previously, put him on Fowler's solution, with the same unsuccessful result.

Prescription: Blue mass, 10 grs., to be followed by castor oil, if necessary. Then, on chill-day, (26th,) begin ten hours before the time of the paroxysm, and take one of the following powders every two hours, with camphor mixture and laudanum, in willow-bark tea: R. Chloride Sodium, 360 grs. Make six powders.

27th. Says that he had his paroxysm at the usual time, and that it "shook him worse than usual;" pain in side (spleen) less, while fever was on: this was shorter, also. These symptoms considered favorable. *Prescription:* Omit all other remedies, and take 60 grs. chloride sodium, three times a day, on well days. Then begin nine hours before chill time, (29th,) and take 40 grs. of the same every hour, in warm gruel.

31st. Has had no paroxysm. Take Fowler's solution, 5 gtt. *ter in die*, as a prophylactic.

Remark.—The cure in this case must be attributed to the salt, as he took nothing else on 29th; for it can hardly be supposed that the gruel had any agency in it.—*South. Med. and Surg. Jour.*

Vesico Vaginal Fistula, complicated with Vesical Calculus, successfully treated by operation. By W. H. Mussey, M.D., of Cincinnati, O.—Mrs. M., 24 years of age, was confined in September last with her first child. There was no discharge from the bladder till two days after the labor had terminated, at which time a very large quantity of water came away "*suddenly.*" The discharge continued to be free, but uncontrollable, causing excoriations of the vulva. After attending three weeks, the physician made an examination, and discovered an "ulcer" on the anterior wall of the vagina. Three weeks later a fistulous opening in the vesico-vaginal wall was observed, and in November last, three successive attempts were made to remedy the calamity by operation, with only partial success.

On March 16th, I examined the patient and could pass my forefinger into the bladder, and proved the fistula to have a diameter of thirteen-sixteenths of an inch. The urethra was cut off from the bladder, excepting a strip of the superior wall, about the sixth of an inch in width.

At the second interview with the patient, she informed me that there was a stone in the bladder, which was readily perceived on the introduction of a sound.

On the 20th of March I proceeded, with the instrument of Mr. Civiale, to crush the stone. Several fragments were removed through the fistula, but owing to the position of the calculus, in the pouch and the contraction of the bladder from the impossibility of keeping it distended with fluid, it was feared the manipulations would cause too much irritation, and the completion of the operation was deferred. In the course of this operation, some *fibres of cotton* were removed, indicating the character of the nucleus. The patient, on coming out of the anaesthetic state, informed us, that when the "ulcer" was discovered, a lock of cotton, medicated in some way, was applied, and she "*never saw it afterwards.*" The next day several small fragments of stone were discharged, and on the second day, a lock of cotton with fragments of stone attached, passed through the fistula. This nucleus after being dried, was one inch and a half long, the greatest width five-eighths of an inch, and in thickness one quarter of an inch; the calculous coating was one-eighth of an inch in thickness.

The bladder was repeatedly washed out with tepid water, till it was evident that no more fragments of the calculous remained, as none could be detected by the fingers in the explorations.

On the 10th of April I attempted the closure of the fistula. In order that the patient should have the benefit of the anaesthetic state, she was placed upon her back. The hips were elevated, an assistant on either side supported the limbs, and held away the vulva, another assistant depressed the perinœum; for these purposes the instruments of Mr. Jobert de Lambelle (of the *Hotel Dieu*), were employed. The mucous surface of the vaginal wall, for half an inch in width around the fistula, (including its edge,) was scarified, and the stitches entered one-third of an inch from these scarifications, including the mucular, without penetrating the mucous coat of the bladder. The "Clamp Suture" of Mr. Sims, of Georgia, was employed to hold the freshened surfaces in opposition. Threads of silk, (five in number,) were first passed, then the silver wire was drawn through and fastened by means of the perforated shot, two slightly curved leaden bars one-eight of an inch in diameter, the anterior being one and a quarter and the posterior one and three-quarters inch in length. An elastic catheter was kept in position in the Urethra, by means of tapes attached to a band around the body, the external orifice being depressed by means of a bit of sheet lead, so that the urine could not be conducted back into contact with the wound. This was removed and cleansed twice a day for three days, and after that once a day—the vagina and vulva being cleansed every day with tepid water, by means of a Glister Syringe.

The patient was kept on her back. On the ninth day the stitches were removed, but I was convinced that after the *sixth* day there was no tension upon them. There was a spontaneous evacuation of the bowels on the fifteenth day. On the eighteenth day the catheter was removed, and the patient allowed to rise.

On the twenty-seventh day of the operation, the patient returned to her home perfectly cured, there being no evidence that a particle of urine had passed the wound since the day of the operation.—*Western Lancet.*

On Chloroform in Rigidity of the Os Uteri. By. G. W. Ronald, M.D., Physician to the Louisville, Ky., Almshouse.—It is not my intention, however, to enter into an inquiry as to the cause of the rigidity of the os uteri, but to call the attention of the profession to the use of chloroform ointment, as I have found it the most expeditious, reliable, and safe mode of overcoming it. I do not pretend to say that it is a specific, for my limited experience in its use would not justify such a conclusion, having used it in but a few instances, but in these, with the most gratifying results. The first time that I made a trial of it was in the Louisville Almshouse, on the 28th day of January, 1852.

Mrs. C. aged 23 years, at 7 o'clock on the morning of the 28th, was taken in labor. I saw her at 10 o'clock. Upon making an examination, the os uteri was sufficiently dilated to ascertain a head presentation, though the membranes were not ruptured. The pains were powerful and strong, continued to return at short and regular intervals, and I consoled myself with the thought that I should be detained but a short time, yet hour after hour passed and still the os uteri had made no perceptible progress towards dilatation. The woman had become restless and despondent, intense thirst, sickness at the stomach with constant retching, throwing off the water almost as soon as swallowed. If the os uteri was touched, she complained of pain, it was hot and unusually rigid, feeling as if a tight band or cord had been drawn around the neck of the organ, which was resisting and unyielding. Having waited upon nature to overcome the difficulty until the patience of the woman, as well as of her attendants was completely exhausted, I determined to resort to some of the remedies usually recommended. Accordingly the arm was tied, and blood abstracted to approaching syncope. Tartrate of antimony, and the warm bath, all in their turn were brought into requisition; yet the condition of the organ had changed but little, though the membranes at this time had given way and discharged a portion of liquor amnii. These means having failed to procure the desired effect, I went to the office for the purpose of making an ointment of belladonna, but was disappointed in finding none in the house. When I was in the act of sending to town for the article, it occurred to me that the ointment of chloroform might as readily relieve rigidity of the os uteri, as contraction of the muscles of the extremities, which I had often seen it do, having had it applied to my own person in an attack of cholera, by my friend and preceptor, Dr. T. S. BELL. The ointment was prepared by taking one drachm and a half of chloroform and thoroughly incorporating it with one ounce of simple cerate; which was freely applied principally upon the external surface of the neck of the organ. At the time of the application the woman complained of slight smarting pain, which passed off in the course of a few minutes, and had it been applied at the commencement, or during contraction of the organ, she would have made no complaint, as was fully proved in the subsequent cases in which I used it. Upon making an examination, twenty-five minutes after the application of the ointment, I was surprised to find the os uteri dilating rapidly, soft and pliant; and in one hour and twenty-seven minutes after its first application the woman was delivered of a fine, robust, and healthy boy.—*West. Jour. Med. and Surg.*

EDITORIAL.

CHOLERA (?) IN NEW YORK IN 1854.—Again we are called upon to record the probable presence among us, of that scourge of nations, cholera. We say probable, for as yet (June 26th) no symptoms indicative of the inception of an epidemic of a grave character, have presented themselves to our observation. That there have occurred in several parts of our city, cases of cholera, and that a very large majority of these cases have terminated fatally, is clearly demonstrated by the testimony of several physicians, and by the official returns of the City Inspector during the last four weeks. An abstract of which so far as relates to this and kindred diseases, we give below. It is not our intention at present, to enter upon a consideration of all the material facts connected with the rise of the present disease, or of its relation to the sanatary condition of our city; our object being confined to a general statement of some of the facts which have been more recently developed. Within the last few weeks there have arrived at Quarantine, Staten Island, three ships, each of which lost passengers at sea, with a disease, resembling in all its characteristics, cholera. The first was the ship "North America," 27 days from Liverpool, with 768 passengers; arrived the 16th day of May. This ship lost 17 passengers during the voyage, and on arrival at Quarantine, several others were sick. The sick were at once admitted into the hospital, and the well were bestowed in the U. S. Store House, their persons cleansed, their clothing aired, and all supplied with good nutritious food. The period required for Quarantine of passengers in good health, is 48 hours. Within this period of detention, cholera broke out among these passengers, and out of 120 or over, that were attacked, about 70 died. The second was the ship "Progress," with 715 passengers, 32 days from Liverpool; arrived the 18th day of May. She lost 44 from the same cause, but her passengers were all healthy on arrival at Quarantine.

The third was the ship "Charles Crocker," 30 days from Liverpool, with 415 passengers; arrived June 3d, and lost 36 from the same cause. Her passengers were all subjected, after landing, to the same sanatary treatment, but no cases of cholera occurred among them while at Quarantine.

In regard to the appearance of the disease in this city, it is believed that about one half of the 128 deaths which have occurred during the four weeks commencing May 27th and ending June 24th, have been among recently arrived emigrants, who, regardless of all sanitary or hygienic regulations, have taken up their abodes in filthy, ill-ventilated, and already crowded courts, alleys or tenements. This was the case in Cherry, and Caroline, and Eighteenth streets, which were among the first which exhibited evidences of the approach or presence of the disease. At the present time, cases are mostly confined to crowded tenements, where large numbers are immured. But even here a thorough cleansing and ventilation causes the disappearance of the disease; *e. g.* as we are informed by Dr. Harris, in one of these human packing tenements, where there are one hundred and forty families in a house having a front of only forty feet, six fatal cases of cholera occurred between the 8th and 13th of June, in three apartments nearly adjacent; but upon purification of that portion of the premises, the disease has subsided. In another dismal and filthy alley in the same neighborhood, there occurred four fatal cases in the course of 48 hours, and the disease immediately subsided upon the free use of disinfectants about the premises.

That the disease, in question, has appeared without any of the usual prodromes of cholera, as seen in 1849, is asserted by many, but this view is by no means clearly substantiated by reference to facts, as the following comparative Tables show.

1849									1854								
Week ending	Total Mortality.	Cholera.	Chol. Infantum.	Cholera Morbus.	Diarrhœa.	Dysentery.	Other Diseases of the Bowels.	Tot. from Chol. & Dis. of Bow'ls	Week ending	Total Mortality.	Cholera.	Chol. Infantum.	Cholera Morbus.	Diarrhœa.	Dysentery.	Other Diseases of the Bowels.	Tot. from Chol. & Dis. of Bow'ls.
May 19	323	6	—	6	5	6	11	34	June 3	415	12	5	12	7	16	5	57
" 26	294	13	—	1	4	3	16	34	" 10	408	14	6	5	11	7	8	51
June 2	270	29	2	9	11	6	12	69	" 17	429	57	4	5	6	2	5	79
" 9	409	121	4	12	17	11	16	181	" 24	437	45	13	8	11	5	4	86
Total	1296	169	6	28	37	26	55	218	Total	1689	128	38	30	35	30	22	273

There is one point which these tables show, which is worthy of notice, it is this: while "cholera" has been gradually ascending the scale of mortality, the usual gastro-intestinal affections of the season have descended in the scale. May this circumstance arise from the well recognized fact, that all diseases which are cognate with, are swallowed up by the prevailing epidemic? Be this as it may, there is no disguising the fact that there exists a tendency towards the formation of an epidemic, and this fact has led the Boards of Health of this city and Brooklyn, to open a hospital in each city, for the treatment of epidemic diseases. The following is the first bulletin of the New-York Board:

MAYOR'S OFFICE, June 24, 1854.

The Mayor and the Commissioners of Health, in view of the possibility that the cholera may become an epidemic, have taken possession of the building No. 105 Franklin street, and are prepared to receive patients. This step we deem proper as a precautionary measure, although we are happy to state that the decrease in the number of cases, this week, is a favorable omen, and the disease is confined to no locality.

JACOB A. WESTERVELT, Mayor; EDWIN J. BROWN, President Board of Councilmen; NATHAN C. ELY, President Board of Aldermen; HENRY E. BARTLETT, M.D., Health Officer; WM. ROCKWELL, M.D. Resident Physician; JED. MILLER. M D., Health Commissioner; THOMAS K. DOWNING, City Inspector.

Commissioners of Health.

OBITUARY.

DEATH OF DR. J. E. WEBER.—Died in the city of Bonn, Prussia, on the 27th of March last, of phthisis, J. EDWARD WEBER, M.D., late of this city. We regret to be compelled to record the death of one who, although young, had already gained the admiration and estimation of the learned of our profession of this as well as foreign countries. Owing to gradually declining health, Dr. Weber had retired from the troubles of an extensive practice in our metropolis to re-establish his health. But it was of no avail, he died of phthisis pulmonum in the best of his years, just entering a career which would have undoubtedly brought him to medical fame and immortality. He was the son of M. J. WEBER, M.D. Prof. of Anatomy and Physiology at Bonn, and born in the year 1827. Although always sickly (he suffered from his 14th year of age, with asthma, bronchorrhœa, and with consecutive emphysema et bronchicatasis, which ran in the last years, contrary to all pathological rules, into tuberculous deposits in his lungs), he commenced, in his sixteenth year at the Frederick Wm. University, at Bonn, his medical study, and prosecuted it with the utmost diligence till he was promoted, *maxima cum laude*, to the degree of doctor of medicine, under the deanship of his father, after having defended his thesis on *The Effects of Chloroform* in 1848. Soon after his promotion, he emigrated to America, and served two years here, in the Ward's Island and Quarantine hospitals, as resident physician, where he took the opportunity to show his great talent and knowledge as a surgeon. Among his publications of interesting cases and successful operations, we only mention his operation for hydatids of the liver. If we peruse the description of this operation, we are struck with the deep mode of reasoning and thorough knowledge of surgical theory and action. If it was only for that operation he can be called a surgeon, whom to have lost so early, we must consider a great loss to our science. Previously to graduating, he published several articles of merit, among which was a prize essay, the subject of which had been proposed by the Minister of Education for several successive years. His last contribution to medical science was an article on the *Radical Cure of Hernia*, in the January number of this ournal, with which our readers are familiar.

DEATH OF PROF. PATTERSON.—Henry H. Patterson, M.D., died at his residence in Philadelphia, on the 27th of April last, aged 88 years. Dr. Patterson was born in Philadelphia, on the 15th of August, 1815. The deficiencies of early educational privileges were supplied by an overcoming zeal and great power of application from within, and his whole life was characterized by that kind of ambition that made him studious, thoughtful, original, and strong in purpose. His medical preceptor was the late Dr. Joseph Parrish, and his degree of "M.D." was obtained at the University of Pennsylvania, in 1836, having presented a thesis "*On the Italian Doctrine of Counter Stimulus.*" Soon after graduation, he entered the Philadelphia Hospital, Blockley, as house physician, where he remained two years, after which he engaged in private practice. In 1848 he was appointed Professor of Materia Medica in Pennsylvania Medical College, which situation he held until the prostration of his physical powers, by chronic disease, compelled him to resign his chair in that Institution, upon which occasion the faculty unanimously made him Emeritus Professor of Materia Medica; a fit mark of their esteem and confidence. Dr. Patterson was a frequent contributor to periodical medical literature, and even while confined to his bed in his late illness, wrote that excellent Biography of the late Dr. Samuel George Morton, which is prefixed to the "*Types of Mankind.*"

DEATH OF DR. A. S. WOTHERSPOON.—Died in Washington City, D. C., on the evening of the fourth of May, Alexander S. Wotherspoon, M.D., in the 37th year of his age. The deceased was a native of this city. He was a graduate of the College of Physicians and Surgeons, of the class of 1841. Subsequently he was House Physician in the New York Hospital, and a contributor to this Journal. In 1843, he entered the U. S. army as assistant surgeon, the active duties of which he discharged with zeal and fidelity. Uniting a good degree of literary with much scientific attainments, he was particularly qualified for the statistical department of the Medical Bureau, and it was in this station that his services were more particularly rendered. Dr. Wotherspoon, as a physician, was much beloved in private practice. He was the medical attendant of President Taylor in his last illness. He died at the early age of 37, but not until he left the mark of a good name as a rich inheritance to his family.

DEATH OF DR. W. H. MACNEVEN.—Died in Savannah, Ga., on the 12th of May last, of phthisis, William H. Macneven, M.D., of this city, aged 38 years. The deceased was a son of Prof. Macneven, of the College of Physicians and Surgeons, and afterwards of Rutgers' Medical College. He was a graduate of the College of Physicians and Surgeons in 1838. Our readers will remember him as the author of an exceedingly interesting paper, *On the Mode of Propagation of Cholera*, &c., in the second volume N. S. of this Journal, and also of several additional contributions to our pages. Dr. Macneven occupied, for several years past, the post of visiting physician to the Emigrant State Hospital, on Ward's Island. Possessing rare excellencies as a gentleman and physician, his untimely death is deeply deplored by the profession at large, as well as by his numerous friends.

TO READERS AND CORRESPONDENTS.

The following works have been received:—

Archives de Physiologie de Thérapeutique et d'Hygiène, sous la direction de M. Bouchardat, Professor d'Hygiène à la Faculté de Médecine de Paris. No. I. Janvier, 1854. *Mémoire sur la Digitaline et la Digitale;* par E. Homolle and T. A. Quevenne. Paris: Baillière, 1854. 8vo., pp. 376. (From the Publisher.)

The Modern Treatment of Syphilitic Diseases, both Primary and Secondary; comprising the Treatment of Constitutional and Confirmed Syphilis, by a safe and successful method; with numerous Cases, Formulæ, and Clinical Observations. By Langston Parker, Surgeon to the Queen's Hospital, Birmingham. From the Third, and entirely re-written, London Edition. Philadelphia: Blanchard & Lea, 1854. 8vo., pp. 316. (From the Publishers.)

A Clinical Introduction to the Practice of Auscultation, and other Modes of Physical Diagnosis, in Diseases of the Lungs and Heart. By H. M. Hughes, M.D., Assistant Physician to Guy's Hospital, etc. Second American, from the Second and Revised English Edition. Philadelphia: Blanchard & Lea, 1854. 8vo., pp. 304. (From the Publishers.)

A Universal Formulary, containing the Methods of Preparing and Administering Officinal and other Medicines. The whole adapted to Physicians and Pharmaceutists. By R. Eglesfeld Griffith, M.D. A New Edition, carefully Revised and much extended. By Robert P. Thomas, M.D. With Illustrations. Philadelphia: Blanchard & Lea, 1854. 8vo., pp. 651. (From the Publishers.)

Anatomical and Physiological Observations. By John Struthers, M.D., Fellow of the Royal College of Surgeons, of Edinburgh; Lecturer on Anatomy. Part I. Edinburgh: Sutherland & Knox, 1854. 8vo., pp. 239. (From the Author.)

Healthy Skin. A Popular Treatise on the Skin and Hair—their Preservation and Management. By Erasmus Wilson, F.R.S., Author of "A Treatise on Diseases of the Skin, etc., etc." Second American, from the Fourth and Revised London Edition. With Illustrations. Philadelphia: Blanchard & Lea, 1854. 8vo., pp. 291. (From the Publishers.)

Auscultation and Percussion. By Dr. Joseph Skoda. Translated from the Fourth Edition. By W. O. Markham, M.D., Assistant Physician to St. Mary's Hospital. Philadelphia: Lindsay & Blakiston, 1854. 8vo., pp. 380. (From the Publishers.)

Proceedings of the Boston Society of Natural History. Vol. iv., 1851 to 1854. Boston: 1854. 8vo., pp. 415. (From the Society.)

Seventh Annual Report of the Regents of the University of the State of New York, on the Condition of the State Cabinet of Natural History, and the Historical and Antiquarian Collection annexed thereto. Made to the Senate, January 18, 1854. Albany: C. Van Benthuysen, Printer to the Legislature, 1854. (From Hon. Geo. W. Bradford.)

Principles of Comparative Physiology. By WILLIAM B. CARPENTER, M.D., F.R.S., F.G.S., Examiner in Physiology and Comparative Anatomy, in the University of London, &c., &c. With three hundred and nine wooden engravings. A new American from the Fourth and revised London edition. Philadelphia: Blanchard & Lea, 1854. 8vo., pp. 752. (From the Publishers.)

The Pathology and Treatment of Pulmonary Tuberculosis, and on the Medication of Pharyngeal and Laryngeal Diseases, frequently mistaken for, or associated with Phthisis. By JOHN HUGHES BENNETT, M.D., F.R.S.E., Professor of the Institute of Medicine, and of Clinical Medicine in the University of Edinburgh. Philadelphia: Blanchard & Lea, 1854. 8vo, pp. 130. (From the Publishers.)

Transactions of the fifth annual Meeting of the Medical Society of the State of North Carolina, held at Raleigh, N. C., May, 1854. Wilmington, N. C., 1854. 8vo., pp. 97. (From the Society.)

Case of Strangulation of the Jejunum released by Gastrotomy. With Observations on the Diagnosis, and Treatment of Intestinal Obstructions within the Abdomen. By JOSEPH RIDGE, M.D. (Reprinted from the Association Medical Journal), 1854. 12mo., pp. 20. (From the Author.)

Materia Medica or Pharmacology and Therapeutics. By WILLIAM TULLY, M.D. Vol. I. No. 12. Springfield, Mass., 1853. 8vo. (From Dr. Church.)

Annual Report of the Resident Physician of the Lunatic Asylum, Blackwell's Island. New York, 1854. 8vo. pp. 30. (From D. Ranney.)

Catalogue of the Alumni, and of the Trustees and Faculty of Castleton Medical College, since its Establishment, in 1818. Published by direction of the Society. Rutland, Vt., 1854. 8vo. pp. 24. (From the Dean.)

Catalogue of the Officers and Students of the Cleveland Medical College. Session of 1853–4. Cleveland, O. 1854. 8vo. pp. 23. (From Prof. Delamater.)

This Catalogue contains a complete list of the Alumni of the School, since its organization in 1844.

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ORIGINAL COMMUNICATIONS.

ART. I.—*Elkoplasty, (ελκος Ulcer and πλασσω)*; *or, Old Ulcers treated by Anaplasty.* (*Read before the Buffalo City Medical Association, June 27th*, 1854.)

By FRANK H. HAMILTON, A.M., M.D., Professor of Surgery in the University of Buffalo, and Surgeon to the Buffalo Hospital of the Sisters of Charity.

SOME writer has said, "old ulcers in 1830 will be old ulcers in 1860," which, not to be understood always in a literal sense, was intended only to express, in a brief and pertinent form, the proverbial obstinacy of this class of sores.

In most cases, the integument has been broken and destroyed by ulceration, and then, usually, bad health, or, perhaps, enlarged veins, have helped to perpetuate the lesion. In other cases, however, the ulcers are directly in consequence of severe lacerating injuries, which have at once torn away the skin beyond the power of nature to repair; and that although the health of the body and of the limb may be perfect. In such cases, the refusal of the ulcers to heal is entirely owing to the extensive loss of integument.

Actual loss of skin is repaired by one or both of two processes. By the development of new, from or upon the free margin of the old skin, or by the contraction of the granulations and of the cicatrix, in consequence of which, the adjacent skin is drawn towards the chasm, and made, as it were, to slide over and cover it in.

This rule admits of but few exceptions. Occasionally, after a very long delay, the granulations acquire the power of forming new skin at various and isolated points of the sore. This process may now and then be observed in the healing of extensive burns, or, perhaps, in the closing up of an ulcer whose surface is excluded from the air. New skin may even find a matrix in the periosteum, as I have witnessed, and maintained several years since. (*Buffalo Medical Journal*, vol. vii. p. 205.) But the conditions are very rare under which these exceptions can occur. The rule remains as we have stated, and if ulcers are not closed by either the projection of new skin from the margins of the old, or by the contraction of the granulations and cicatrix, then, usually, they must remain open. To the action of both of these processes there is, however, a limit. The formative power of the old skin does not extend beyond a few lines. The new vessels, becoming more and more attenuated as they stretch inward from the periphery, lose, at length, the power of generating epithelial cells, or, if formed, they are too imperfectly organized to sustain an existence, and they crumble away from the slightest provocation. Slowly, but perceptibly, the opaque diaphragm proceeds to shut in the granulations, and for a long time encourages a hope that a cure is to be accomplished. But just when the work is almost consummated, a rapid disintegration sweeps away in a few hours the patient labor of many months. Again and again the reluctant labor is renewed, and as often suddenly, and without provocation, is it arrested and broken up. At the same time the granulations have ceased to condense, and the cicatrix to contract, either because these actions have attained their natural limits, or because the adjacent skin has reached its utmost tension, and affords effectual resistance to further stretching. Here the process of closure forever ends, and the "old ulcers of 1830 will be old ulcers in 1860."

Nature has done its utmost, and hitherto art has failed to complete the work.

I beg to suggest a procedure, which, hereafter, in some unfortunate cases of this class, may deserve a trial.

I propose to close the ulcer by an operation of anaplasty. In short, to imitate one of the processes of nature, by sliding in old skin to repair a waste, where the process of forming new skin has ceased, and been finally given up.

If we seek to obtain this supply from the neighborhood of the ulcer, around which the skin has already reached its utmost tension, we shall only substitute one ulcer for another. We must, therefore, generally look to the opposite limb, or to the limb of some other person, for the material with which the transplantation or engrafting is to be made.

The mode of accomplishing this, will not differ materially from that which has been generally adopted in anaplasty from remote parts, except that the ulcerated surface ought to be excised freely before the new skin is laid upon it.

By this means, I hope, gentlemen, not only to supply an amount of skin equal to the size of the piece transferred, but to furnish, also, a nucleus from which additional skin shall be formed. I hope to establish a new centre of life—an oasis—from whose outer verge a true and healthy vegetation shall advance in every direction over the exhausted soil.

It is not improbable, also, that the graft will itself expand, or be drawn centrifugally by the contraction of the surrounding granulations and cicatrix, conversely, as the skin about the ulcer had before been stretched and drawn centripetally, by a similar action of the granulations and cicatrix situated within its free margin, so that, after a time, it will cover more space, independent of any actual growth, than it did originally. The opposite of this happens usually in anaplasty, and would occur here, did the flap equal or exceed in size the wants of the parts to be supplied. The flap would contract, thicken, and project itself above the surface. But in old ulcers, it will generally be found impossible to furnish a direct supply of integument equal to the loss. A deficiency must probably still exist, and sufficient, it is believed, to determine in the transplanted skin a necessity of expansion.

The value and practicability of these views are, I trust, in a measure established by the results, in the case which I shall now take the liberty of bringing before you.

You will excuse me, however, if I detain you a moment longer to explain to you that, so long as eight years since, I proposed the same operation, and had anticipated most of the results which I have now actually obtained.

In the report of my surgical clinic, for 1846, at Geneva Medical College, published in the *Buffalo Medical Journal*, vol. ii, p. 508, occurs the following passage :—

" *Indolent ulcer.* M—— of Geneva.—This lad, now about fifteen years old, had the right leg and part of the thigh terribly lacerated, and almost deprived of its integument, by a threshing-machine, eight years ago. The wound has never closed entirely, but an indolent ulcer of great extent exists, surrounded by a broad margin of hard integument, from which sometimes new skin will form, and then it will rapidly crumble away, and the ulceration will extend, perhaps, beyond its original bounds. Thus it has continued to partially close and again open, during all this time ; meanwhile, the health and strength of the lad have remained excellent, but the leg has become bent at the knee, and he walks with a halt. Two years ago Dr. Hamilton took a cast of the ulcer, which is now seen to correspond almost precisely with its present extent.

" Dr. Hamilton and others having tried almost every plan of treatment which would offer a prospect of success, and having so completely failed, as Dr. Hamilton believes, because the indurated margin, near two inches in breadth—all around the sore, is incapable of projecting from itself sound skin, the Dr. has proposed to the boy a plastic operation, with the view of planting upon the centre of the ulcer a piece of new and perfectly healthy skin. He proposes to take this from the calf of the other leg (having secured the two together), not intending to cover the whole sore, but perhaps two or three square inches, which he believes will be enough to secure the closure of the whole wound in a short time."

Two years before the date of this clinic, when I took the cast alluded to in the above report, I had made the same proposition to the lad, and when he declined submitting to it, I appealed to his father, who was a worthless inebriate, to allow me to secure one of his legs to his son's, that I might make the transplantation from him. In no other way, I assured him, could he so much benefit his family.

I need scarcely say that permission was never obtained, and that I have never found an opportunity of determining the practicability of my suggestions until during the last year, and in the person of the man who is now before you.

The following is the report of the case, copied, in part, from the Hospital Records:

Horace Driscoll, aged 30 years; Irish laborer; had the skin and flesh extensively torn from the right leg by a dirt car, on the 3rd of November, 1852. He has been in the hospital most of the time since then until now. The wound has nearly healed several times, but never entirely; after exercise the whole would give way, and the ulcer again extend itself completely around the leg.

Jan. 21, 1854, I made the following operation:

The patient was laid upon his belly, upon the operating table before the class. A flap of skin measuring seven inches by four was then raised carefully from the calf of the opposite leg, extending in depth through the cutaneous and celluloadipose textures, until the fascia was in sight. Its remaining attachment to the body was by a broad and thick base. The hæmorrhage was slight; no vessels were tied. Lint, spread on both surfaces with simple cerate, was laid between the flap and the surface from which it had been detached, other pledgets of lint similarly covered were placed on the outer surface, while over all and around the entire limb was wrapt a large mass of cotton batting, secured in place by a lightly turned roller.

He was then laid in bed and perfect quietude enjoined.

Jan. 22.—During the night the wound has bled until the patient looks pale from the loss. The bleeding has now ceased.

Feb. 4th.—Two weeks since the flap was raised. The patient has had to be sustained with beer, his appetite having failed very much since the operation. The flap has been dressed in the same manner as at first, nearly every day. It looks healthy. No part of it has sloughed.

To-day the operation was recommenced before the class, by dissecting out the granulations and part of the cicatrix from the diseased leg, and thus forming a deep bed of the size and shape of the flap as it now appeared, both contracted and thickened. The flap was then made raw again on its margins, and its lower surface was shaved off, with the double purpose of removing the granulations, and of diminishing its excessive thickness. When the bleeding had ceased, the left leg was carried across the right, so that the tendo-Achilles and heel of the left leg rested upon the instep and ankle of the right—a thick cotton pad being interposed to prevent painful pressure. The flap was now brought snugly into its new bed, on the right leg, and well secured with interrupted sutures, a moderate compress, and roller. The two limbs were further secured immovably to each other by bands, and protected at various points by well made compresses, and the wounds carefully covered with lint spread with cerate.

Feb. 5th.—The wound has bled again, as after the first operation, although ice was applied diligently from the moment the dressings were completed. Much pressure was regarded as inadmissible. Bleeding ceased when he became faint, about three hours after the operation.

Feb. 18th.—Two weeks since the last operation, and four weeks from the first. Patient has required to be sustained constantly with beer and nourishing diet. His appetite still remains bad. Bowels have not been moved in two weeks. He has not suffered much pain, only fatigue. To-day the base was separated from the left leg, the flap having united through most of its edges and under surface, to the opposite leg. No bleeding of consequence followed. The parts were thoroughly washed and dressed with ung. basil. and a snug roller applied. Ordered sulph. mag. ℥j.

Feb. 19th.—No movement of bowels. Repeat sulph. mag.

Feb. 20th.—One corner of the extreme end of the flap is beginning to slough.

Feb. 21st.—Bowels have moved. Sloughing of flap continues. Ordered yeast poultice.

Feb. 25th.—Line of demarcation formed, insulating about one inch and a half of the flap, at the corner where the sloughing commenced.

Beyond this the sloughing never extended. The surfaces continued to close, and about one hundred days after the flap was laid down the healing was finally consummated, and now after a lapse of nearly three months, during which he has been acting as a subordinate dresser at the hospital, the ulcer has not re-opened or shown any tendency that way.

The wound made by the removal of skin from the left leg was completely healed over in about the same length of time as the ulcer on the right, and the whole left limb is now as sound and as perfect as before the operation.

Driscoll is, however, at present, by no means a well man. His health has suffered considerably from his long illness, and from his prolonged confinement in bed, which dates from the time of the accident, through most of the period, up to the time of the closing of the wounds since the operation. The cicatrix around the new skin is tender, and especially at one point where several pieces of bone exfoliated soon after the accident, and precisely over which, unfortunately, the sloughing of the flap took place. The ankle is also somewhat stiffened by the contraction of the skin, and of the gastrocnemii and tendo-Achilles, which latter were seriously involved in the original injury. These, however, are conditions which the operation did not propose to remedy, at least only in a small degree, or they are temporary accidents, and will certainly yield to time and careful use. If they were to continue, however, it will not be denied that, in the permanent sealing up of a sore, which, but for this operation, must probably have remained open during life, he is amply repaid for all that he has suffered at my hands. I venture to predict that, within one year from this time, he will be able to labor nearly or quite as well as before the accident.

On the 12th of March, five weeks after the flap had been transplanted, it had united by adhesion to the adjacent skin, through about one half of its circumference. The other half was surrounded by a border of granulations and of new skin, varying in breadth from one to ten or fifteen lines; but only at a few points was the bridge of new skin complete. It was especially noticed that nearly all, probably nine-tenths, of this new skin had sprung from the margins of the flap, and only the remaining fraction from the adjacent cicatrix; demonstrating that after transplantation and complete separation from the parent limb, its vitality was unimpaired, and that its re-productive power, if I may so speak, was vastly superior to the re-productive power of the old cicatrix.

You may notice to-day also, that since the cicatrization was completed, the cicatrix formed by growth from the flap, has contracted; and, that, in consequence of this contraction, the flap has become expanded, or been stretched outward, and its surface has become flattened and firm, whereas, it was, at first, and for a long time, elevated above the surrounding skin, and flabby.

Summary:—

1st.—Ulcers, accompanied with extensive loss of integument, do generally refuse to heal, whatever may be the health of the body or of the limb.

2d.—Anaplasty will sometimes succeed in accomplishing a permanent cure, and especially where the health of the body and of the limb are perfect, and where, by inference, the refusal to heal is alone attributable to the extent of the tegumentary loss.

3d.—The graft must be brought from a part quite remote; generally from an opposite limb, or from another person.

4th.—If smaller than the chasm which it is intended to fill, the graft will grow, or project from itself new skin to supply the deficiency.

5th.—It is not improbable that the graft will expand during the process of cicatrization at its margins, but especially for a time after the cicatrization is consummated.

6th.—In consequence of one or of both of these two latter circumstances, it will not be necessary to make the graft so large as the deficiency it is intended to supply.

Art. II. *Practical Observations on the Remedial Properties of Simaba Cedron, and on its employment as a Substitute for Quinine.* By Samuel S. Purple, M.D.

It will be remembered by those who take especial interest in investigations which relate to vegetable materia medica, that about 1850 the attention of the medical public was particularly called to "cedron," as an invaluable specific for the bites of venomous snakes. In the spring of 1852, Burtis Skidmore, Esq., of this city, placed in my possession, for examination, two of the kernels. This was my first acquaintance with "cedron," for at this time I had not seen Mr. Hooker's description and figure of the tree and cotyledons.[*] From the limited opportunity which these seeds furnished me of observing their effects in an obstinate case of intermittent fever, I became strongly desirous of testing its virtue on an extensive scale in this disease. Such an opportunity I failed in obtaining until September, 1853, when I received from Dr. J. A. Magrath, of Kingston, Jamaica, a package, containing about a pound of the cotyledons.

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[*] *London Jour. of Botany*, 1850, and *Pharmaceutical Jour. and Transactions*, vol. x. p. 344.

During the autumn of 1853, cases of intermittent fever were not of unfrequent occurrence in this city, especially in the vicinity of Canal and Hudson streets, and, in fact, in the neighborhood of most of the "*main sewers*" in different sections of the city. It is not our intention to stop here and offer an explanation of the causes which are, and must be, from necessity, continually at work in producing intermittent fever in this city. This would require a searching investigation into our whole system of drainage and supply, and would in no way answer the objects for which this paper is written. As before stated, cases of fever were not of unfrequent occurrence, and during the months of September, October, and November, nine cases were treated with the article under consideration. Of this number, six were recent, and three were of long standing, having successfully resisted quinine, Fowler's solution, and all the usual means resorted to in the treatment of the disease. Of the six recent cases, five yielded readily and permanently to the remedy, in doses and at periods that will be particularized in the following cases; while the remaining one resisted, successively, emetics, cedron, quinine, Fowler's solution, etc., and finally yielded permanently to beberine and nux vomica combined. Of the three cases of long standing, and previously treated by different remedies, unsuccessfully, two yielded permanently to cedron, and one yielded temporarily, returning under the use of the remedy, but finally yielded permanently to cedron, after the administration of an emetic, followed by ten grains of pil. hydra. in divided doses.

CASE 1.—Mrs. E., aged 38 years, of nervous sanguine temperament, rather feeble health, the mother of five children, resided in Newark, N. J., during the summer of 1852, and there contracted intermittent fever, from which she slowly recovered under the use of quinine, having experienced three relapses in the course of the season. In the month of September, 1853, having resided in this city nearly a year, she was again attacked with the quotidian form of the disease, and consulted me in the intermission between the third and fourth paroxysm. She was ordered, as there was considerable gastric derangement, fifteen grains pil. rhei. comp., to be taken immediately; and after the next paroxysm of fever, to take ten grains of the cedron in powder every two hours. At the period of the next (the fifth) paroxysm, she complained of slight headache, but experienced no chill. From this time she was ordered ten grains of cedron, in powder, three times daily, for ten days. She had no return of the disease, and enjoyed, after, her usual health.

CASE 2.—Mr. B., book-keeper in a bank, aged 27, of spare habit, contracted intermittent fever on Staten Island, in the fall of 1852, which yielded to quinine. Late in the summer of 1853 he was again the subject of the disease, and consulted me some four weeks after the occurrence of the first paroxysm. Relying upon his own judgment, he had already taken quinine, in the same doses as the fall previous, with the effect of temporarily arresting the disease. Its return, after an interval of nine days, led him to resume the use of the quinine in increased doses, until singing of the ears convinced him of the propriety of consulting a physician. At the time of his first visit, finding that there existed much tenderness or pressure over the epigastrium, slight yellowness of the conjunctiva, and tongue coated with brown fur in the centre, with red tip and edges, he was ordered thirty grains of ipecac. in powder, with ten grains of calomel. This portion operated freely as an emeto-cathartic, and after the succeeding paroxysm of ague, he was ordered ten grains of cedron, reduced to powder by grating the seed on a nutmeg grater, every three hours. The paroxysm of ague, which was expected, at its usual period, was delayed some two hours, and was somewhat less in severity and shorter in duration than that which succeeded the action of the emetic. As there existed some pain in the bowels, which was supposed to arise from the action of the cedron, he was ordered the same amount as before, every four hours, combined with fifteen drops tinct. opii. comp. These directions were steadily adhered to for four days, when the paroxysms of ague having ceased, he was directed to omit the paregoric, and use the same amount of cedron three times a day. These orders were followed for some two weeks, when the further use of the medicine was suspended. Mr. B. has had no return of the disease. At no time did he complain of singing in the ears, or any other unpleasant sensations, except the slight griping pain in the bowels, which could be attributed to the action of the cedron.

CASE 3.—M. S., aged 29 years, by profession an accountant, of spare habits, and strong nervous temperament, in the summer of 1852, contracted intermittent fever, of the quotidian variety, at Morrisania, where he was then residing. His attending physician put him upon the use of quinine, which, in the course of five days, arrested the paroxysms of ague. Remaining, however, exposed to the same causes, the disease returned in the course of the third week, when he was again put upon its use, with the effect of arresting the disease, although more tardily than on the previous occasion. From this time he remained free from the disease, until January, 1853, when, from domestic causes, his usual health having become considerably impaired, he was attacked with the disease, with much greater severity than on either of the previous occasions. Tonics, combined with quinine, were ordered him by his medical attendant. These were perseveringly used, for a period of four weeks, with but slight beneficial effects, and, meantime, his general health had become still more impaired by the disease. Seeing that something more was required to arrest the paroxysms, he was, very properly, ordered an ipecac. emetic, which was followed by blue pill, in five grain doses, three times daily, until two paroxysms (the fourth day) had passed by, when he was ordered Fowler's solution, accompanied with a liberal diet, and, during the well day, a moderate use of London porter. Under this treatment, there occurred soon a decided improvement in Mr. S.'s case, and, although at the end of two weeks, he had no distinct ague-chill, yet there remained a periodical headache, accompanied with fever, and neuralgic pains in the facial and inferior maxillary nerves. These, under the use of carbonate of iron and vegetable tonics, almost entirely disappeared, and from this time until the succeeding October, with the exception of an occasional chill, or ague paroxysm, he continued to attend to his usual business.

In the latter part of September, 1853, Mr. S. spent about a week on Staten Island, and, immediately on his return to this city, was seized with the tertian form of intermittent fever, for the cure of which, in the course of four weeks, he took an ipecac. emetic, quinine, Fowler's solution, nux vomica, and pil. hydrar., followed again by quinine, with but slight, or temporary benefit. His general health having now become considerably reduced, he was almost ready to despair of a cure being effected in his case.

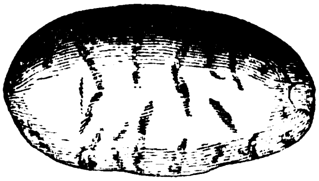
On the 2d of November, I was first consulted in regard to the treatment of the case, and, as he had but two days previous taken an emetico-cathartic, and there was but little chylopoietic derangement, he was immediately put upon the use of cedron in powder, and in twenty grain doses, every four hours in the froth of porter, with directions to suspend the remedy only during the hot stages of the disease. For four days he steadily persevered in the use of cedron, and at the end of this period, as there was a marked improvement —the paroxysms of fever having nearly ceased, and as there was present slight diarrhea, accompanied with griping pains in the bowels—the cedron was diminished to ten grain doses, each dose of which was combined with fifteen drops of tinct. opii camph. This treatment was continued for three days, when all evidence of paroxysmal symptoms had disappeared. Mr. S. was now ordered ten grains of cedron every morning, with a view to its tonic effect, for I had become satisfied that it possessed decided tonic properties, especially in those states of the system which call for the use of columba, gentian, and other vegetable tonics. Under this treatment, he gradually and permanently convalesced, and has since had no return of the disease.

Case 4.—A. N., aged 19 years, of marked bilious temperament, and robust constitution, on the 26th of July, 1853, sickened with what he supposed was a bilious attack, which, under domestic treatment, continued three days, when he was seized with a severe fit of ague, about 11 o'clock, A.M., which was followed with much febrile excitement, intense pain in the head, etc., which, in its turn, was succeeded by profuse sweating. With this paroxysm, all sickness passed off, and the next day he considered himself in usual health. On the second day from the first ague fit, at M. he sickened again, with a paroxysm, the same as two days previous, when, for the first time, he consulted me. Believing his attack to be intermittent fever, he was ordered to take of cedron in powder, as much as could be held upon a Spanish shilling piece, every four hours, for forty-eight hours, omitting it only during the succeeding paroxysm, if it should occur. He took as directed, in all, ten doses, with the effect of permanently arresting the disease. He has since had no return of intermittent fever.

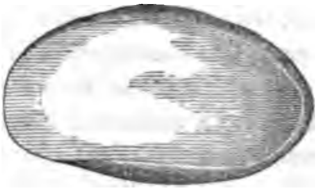
CASE 5.—A little girl, aged about six years, daughter of Mr. H., of 29th street, was observed to complain, every other forenoon, of being chilly, which condition was followed by headache and fever. She was subjected to domestic treatment for a week or more, when the paroxysms of ague became well marked, and the fever was accompanied by delirium. When first seen by me, the centre of her tongue was coated with a brownish-yellow, the tip being red; she complained of lassitude, and considerable pain in the epigastric region. She was ordered ten grains of pulv. rhei, with three grains of calomel, which produced three evacuations of the bowels. She was then directed to take a teaspoonful of the following mixture every four hours: pulv. cedron, thirty grains; simple syrup, two ounces; paregoric, one drachm. These directions were carried out for thirty-six hours, and as the next paroxysm did not recur, she was ordered a teaspoonful morning and evening. Her recovery was complete, and although apparently exposed to the same causes, she has since had no return of the disease.

REMARKS.—In addition to the foregoing cases, reported, and alluded to as treated in the fall of 1853, I have treated six cases during the past summer, (1854) exclusively with cedron, with the following results: Four with cure, prompt and permanent, one passed from my observation before the result was known, and the remaining one is still under observation, having resisted emetics, quinine, and beberine, previous to consulting me.

From these results and those obtained in neuralgic cases, which we think unnessary to detail, there can hardly arise a doubt but that the cotyledons of the Simaba cedron, one of which is here represented, possess decided anti-periodic properties. And in this belief we do not stand alone. Dr. Cespèdes, of Bogota; M. Herran, of France; Dr. P. Smith, of San Francisco, Cal.; and Dr. Magrath, of Jamaica, W. I.; have each testified, as will be seen hereafter, to its decided medicinal virtues in this respect.



Convex surface of a Cotyledon of Cedron.



Flat surface of a Cotyledon of Cedron.

Dr. Magrath, of Kingston, Jamaica, has used it extensively not only in the treatment of intermittent fever, but also in yellow fever. In this latter disease, he writes me, that it appears as useless as quinine, or any other remedy to assist the progress of the disease, in most of the cases in hospital, although it was thought that the skin of those who were taking it, was less dark or congested, than those who did not take it. His mode of giving it in intermittent fever, was in powder, or in pills, in ten grain doses every three hours, for twenty-four or thirty-six hours, and with the effect of successfully arresting the disease; he always gave it during the intermission, and it almost always prevented a second paroxysm if it failed in the first.

Thus it will be seen that the evidence which has already accumulated in regard to this plant, points to the fact that it possesses important anti-periodic properties. And perhaps upon further investigation, it may be found to be a valuable substitute for quinine—a desideratum long sought after. Our own observations have been confined to the cotyledons in powder in intermittent, and in tincture in neuralgia, dyspepsia, and chronic derangements of the stomach, involving impaired digestion. In these conditions we are satisfied that it possesses curative properties equal to columba, quassia, or any of the vegetable tonics, and in view of these properties, we feel assured that it is worthy of an exalted position among this classification of the vegetable Materia Medica.

To M. Planchon, according to Hooker, belongs the merit of giving a name and botanical station to the cedron plant. In his truly excellent *Revue de la Famille des Simaroubées*[*] he first described this plant from Mr. Purdie's specimens in Mr. Hooker's Herbarium. For the following description and figure, we are indebted to the *London Journal of Botany*, as before cited.

Simaba *cedron*, *Planch.*; trunco erecto ramis subumbellato-capitatis, foliis longissimis pinnatis glabris sub-20-jugis cum impari, foliolis subcoriaceis eliptico-lanceolatis acuminulatis basi obliquis, racemis elongatis compositis ramis rufescenti-subvelutinis, drupis magnis ovalibus solitariis. —S. Cedron, *Planchon in Hooker's Lond. Jour. Bot.* vol. vi. p. 566.

Hab.—New Grenada. Banks (near San Pablo) of the Magdalena, *W. Purdie*, Isle de Caybo, coast of the Pacific, *Thomas Seemann.*

Descr.—The height of the *tree* is not exactly stated, but it does not probably exceed twenty feet, with an erect undivided *trunk* not more than six inches in diameter, crowned with a dense and somewhat umbellate head of *branches*. *Leaves* glabrous, two feet and more long, pinnated with twenty or more alternate, rarely opposite sub-coriaceous, sessile *leaflets* 4–6 inches long, accuminulate, oblique (or inæquilateral) at the base, penninerved; the *rachis* is terete, terminated by an odd leaflet. *Racemes* two feet or more in length, strict, branched, the main *rachis* and *branches* clothed with minute ferruginous, velvety down, chiefly towards the apices; *branches* short, solitary or clustered; *pedicels* bracteolated. *Calyx* minute cup-shaped, obscurely 5-toothed feruginous-downy. *Corolla* of five, linear, obtuse or retuse, spreading *petals*, pale brown and downy externally. *Stamens* ten, short, arising from the back of as many staminiferous *scales* which are erect, and approximate in a tube. *Anthers* oblong, introrse. *Ovaries* five, seated upon a columnar *gynophore*, downy. *Styles* five united into one, above the base, and exceeding the stamens in length. *Ovules* one in each ovary. *Fruit*, very large, solitary (by abortion); *drupe* of an oval form, oblique at the top, and having a scar below the summit indicating the former site of the style. The soft portion of the fruit seems in the preserved state, not to have been very soft and fleshy, it is lined with a horny *endocarp*. *Seed* large, solitary, suspended, its integument membranaceous, with a conspicuous *chalaza*. *Albumen* none. *Embryo* conform with the sides, *Cotyledons* very large, fleshy, white when fresh.

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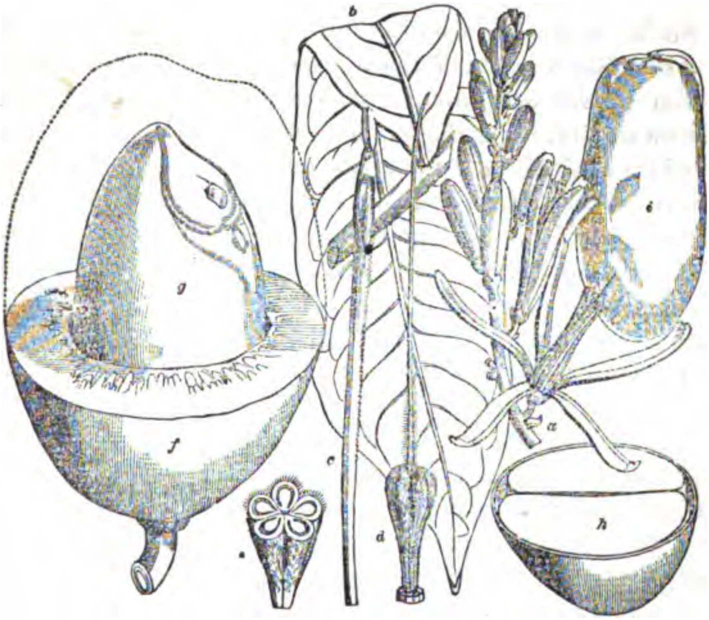
[*] *London Journal of Botany.* Vol. v. p. 566.

Simaba Cedron.



a branch of a raceme; *b* a leaf; *c*, scale, bearing a stamen; *d*, ovaries, with the gynophore; *e*. transverse section through the five ovaries, *magnified*; *f*. fruit cut round transversely, so as to exhibit the transverse seed; *g*, the dotted line shows the outline of the entire fruit; *h*, transverse section of the seed; *i*, a cotyledon, in the state which it is exported:—*nat. size*

In regard to the history of its introduction into practice, we have nothing certain. M. Herran,* Chargé d'Affaires de la République de Costa Rica, in France, says that "it was only in 1828, that the native Indians brought to the market of Carthagena, some seeds of *cédron.* To prove their infallible virtue, they submitted animals and themselves to be bitten by the most dangerous serpents, called *Toboba Corlia de la Montagne*, etc., and the promptitude with which the poison was neutralized, was so marvelous that a single seed sold for a doubloon, (eighty-three francs)." * * * * * * * * "During my long sojourn in Central America, I had recourse to the seeds of cedron, successfully, in eight different cases." * * * * * * * * * * * * * "I have also successfully employed this medicine in intermittent fevers, which had resisted sulphate of quinine."

Sir W. J. Hooker, who has given by far the most complete and scientific account of the cedron to be found,† says "By whom it was first brought into notice in Europe, I am not aware, but my earliest information respecting it was derived from Mr. Wm. Purdie, late botanical collector for the Royal Gardens, Kew, and now curator of the Botanic Garden, of Trinidad. At Bagota, Mr. Purdie had made the acquaintance of Dr. Cespèdes, an intelligent physician of the country, who directed his attention to the plant in question, and who forwarded to me a drawing with very fair analysis of the flower and fruit." * * * * * * In his future journeyings, Mr. Purdie did not fail to search for the plant in its native woods, and on his way to the province of Antigua, near the Magdalena, he wrote word, July 1846: 'I have had the good fortune to detect the celebrated *cedron*, a small tree with habit of the Jamaica Mountain-Pride, (*Mela Azedarach*). The seeds are here much sought after, and sold at one real each cotyledon, being considered an invaluable specific for the bites of snakes, for intermittents and stomach complaints generally. The bark and wood also abound in a high degree with the bitter principle.' The dried specimens sent by Mr. Purdie were further accompanied with the following note: 'The *cedron* has an erect stem not more than six inches in diameter, crowned by an umbelate mass of branches, with large handsome pinated foliage; so highly are the seeds prized here for their powerful medicinal virtues, that they cannot be purchased for less than two reals, or one shilling each. I have had the testimony of medical men in Bagota in favor of their properties, and Dr. Cheyne has frequently tried them with success. Dr. Cespèdes, some years ago, was sent expressly on a mission from Bagota to the locality of this plant, which is in woods immediately behind the village of San Pablo, on the banks of the Rio Grand de Magdalena.' The cedron is, however, probably more extensively distributed than Dr. Cespèdes and Mr. Purdie imagine, especially to the westward towards the Pacific, in New Grenada. Another collector of Kew Gardens, then and still on board of H. M. surveying ship "Herald," (Capt. Kellett, commander), transmitted specimens to Kew the following year, 1847, from the Isle de Caybo."

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* *Comptes Rendus.* Vol. xxxi. p. 141-2.

† Vide *Description and figure of the Cedron of the Magdalena River*, (*Simaba cedron*, Planchon). By Sir W. J. Hooker, D.C.L., F.R.S.—*London Jour. of Botany*, 1850.

Dr. Peter Smith, of the City Hospital, of San Francisco, received a letter dated Nov. 22d, 1849, from Don José Abaldia, Govenor of Panama,* in which it is stated that, "the tree which produces the fruit, and is called the '*cedron*,' is described in the scientific work of Dr. Cespèdes, one of their own naturalists. * * * * The tree grows abundantly in humid places, and as the wood is inapplicable to the uses of life, and the fruit neglected by animals on account of its bitterness, an abundant supply is predicted."

I might here state that the first specimens I saw, those presented me by Mr. Skidmore, were obtained at Panama.

Dr. Horner, of the U. S. N., states† "that Dr. Smith, of San Francisco, used for the cure of chronic dysentery and intermittent fever, the kernels of the cedron, a fruit obtained at Panama. * * * * He gave them scraped in the dose of ten or more grains, and thought them equally as efficacious as quinine. The cedron has great celebrity among the people of the Isthmus, for the cure of snake bites, and he states that they carry it about their persons to have it in readiness for immediate use when needed. Dr. Smith gave me a number of kernels, and one entire pod, which I brought home for distribution. While crossing the Isthmus, I would have been much pleased to find the tree which yields this valuable medicine, but I was unable to obtain any accurate description of it, or of the places where it grows."

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* *Philadelphia Medical Examiner.* Vol. vii. N. S. p. 140. † *Ibid*, p. 91.

Dr. Pereira, in the last edition of his great work, on *Materia Medica*, makes no mention of this plant. On the 2d of Nov., 1850, however, he wrote Sir J. W. Hooker, regarding it in the following words,* "I am not acquainted with any observations made in England, or even in Europe, respecting the *Simaba cedron.* * * * * The specimen of the seeds and fruit, which I possess, were brought a few months ago from Panama, by a gentleman (not a medical man). They were given him by W. Barrington, Esq., an English surgeon at Panama. The statement accompanying them was to the effect that the seeds were much used, and with great confidence by the native doctors of the Panama country, both locally and internally, as the grand antidote against snake poison.

"To the taste these seeds are intensely bitter, and doubtless like the bitter barks and woods of other Simarubaceous plants *(e. gr. Quassia* and *Simaruba)* they possess the properties of other bitter tonics, and might be useful in dyspepsia, and perhaps ague."

From all that we can learn regarding its habitude and mode of procurement, we are led to believe that the only obstacle in the way of the use of cedron in medicine, is its apparently somewhat limited supply. We say apparent, for in a letter received from Dr. Magrath, we learn that "the cedron appears to be obtainable in quantity, with some little difficulty, from Carthagena; but a brisk demand, no doubt, would cause an equal supply." The history of all new medicinal agents, derived from savage or semi-civilized countries, teaches us the fact, that at first, the remedy sought after is obtained with much difficulty; but we should not, from this cause alone, neglect to investigate or enquire into its uses; and should it, according to our belief, be found that this article possesses decided merit, and some advantages over quinine, we have no doubt but that some of our enterprising commercial druggists will find it to their interest to devise means for its introduction into our market.

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* *London Jour. of Botany, opit. cit.*

Finally:—From the declared experience of various observers of the medicinal effects of the Simaba cedron, we are warranted in drawing the following conclusions regarding its therapeutic action:—

That it possesses decided anti-periodic properties, and is therefore applicable in the treatment of periodic diseases.

That it is less likely than quinine to produce the aggregate of encephalic or neuropathic phenomena, induced by overdoses.

That it may, in large doses, repeated often, produce griping of the bowels, and even diarrhœa; but that these conditions are easily controlled by appropriate medicaments.

That, as a remedy in intermittent fever, it possesses properties, in many respects, equal to quinine, and in most cases is equally adapted to the curation of this disease.

That, in the treatment of yellow fever, it does not appear to possess any particular advantages over quinine, but nevertheless is equally well adapted to fulfill the indications which call for the use of this latter remedy.

That it possesses marked tonic properties, and deserves a prominent place in this classification of the Materia Medica.

That in chronic dysentery, diarrhœa, dyspepsia, and all states of the stomach, accompanied with impaired or difficult digestion, its use will be found to be attended with benefit.

That, should a demand arise for its use in medicine, it is believed that it will be found not difficult to obtain a supply, in quantities sufficient to afford it at a much less price than quinine.

ART. III. *Amputations of the Lower Extremities, at Bellevue Hospital.* By JOHN O. STONE, M.D., one of the Surgeons of Bellevue Hospital.

MESSRS. EDITORS:—The following cases of amputation were performed, at Bellevue Hospital, during the last three years. Some of them are interesting, and have a value in themselves; but, independently of this consideration, I wish to publish them, as a small contribution to statistical knowledge, and aid in solving the question, how far amputation is to be recommended as a means of cure?

A few years ago, I published in your Journal some statistics on amputations, and to them these cases from Bellevue Hospital can appropriately be added.

Very truly yours,

JOHN O. STONE,
30 Waverly Place.

To Drs. Purple and Smith.
July 20th, 1854.

I.—AMPUTATION OF THIGH.

CASE 1.—*Amputation of Thigh. General Ostitis, etc.*—A female, aged 26 years, has suffered from a diseased knee for more than a year. It was enlarged, as in scrofulous disease. The condyles apparently increased in size, and opposite to the joint there was a soft swelling, as if pus was enclosed in the joint. Since the commencement of the disease, the knee has been very painful, and now her sufferings are excruciating. The femur was felt to be enlarged to a considerable extent above the knee. She had lost much flesh, and had a general cachectic look.

In consultation, it was decided that the thigh should be amputated, which was done on November 22d, 1851.

On sawing the bone, it was observed that the saw traversed the bone with remarkable ease. The bone was found enlarged and softened, and it was thought best, for the purpose of going above the diseased part, to saw the bone again higher up. This was consequently done, an inch higher up, but not with the effect desired. The bone was still found enlarged and softened. There was great vascularity, and, although six hours were allowed to elapse before the stump was dressed, there was much oozing of blood. Fourteen ligatures were used. The bone itself was vascular.

The tibia and femur were found much enlarged, and the periosteum thickened. There was no pus in the joint, but great thickening of the synovial membrane. The cartilage covering the heads of the bones was removed in several places. The condyles of the femur increased in size, and covered on their sides with a deposit of new bone. On sawing open the tibia and femur, their interior was found red and vascular, the outer crust thin, and the reticular tissue enlarged, softened, and containing oily fluid. There was also, in the interior of both bones, a deposit of cartilaginous looking material, which was thought to be cancer; but, on examination under the microscope, no cancer cells were found. There was, what seemed to be, a sequestrum in the lower part of the femur, which extended quite into the condyles. The disease, I suppose, must be regarded as an inflammation of the bones.

For more than a week after the operation, the intense pain in the bone continued, reaching as high as the pelvis. Much pain was also felt in the back and abdomen. These pains served to prolong the suspicion that there might be malignant disease. Large doses of morphine were required to alleviate her sufferings, and she was put upon the use of he iodide of potash, three times a day.

Three weeks after the operation, the pains ceased. The stump had nearly healed; most of it by the first intention. The ligature of the femoral had not yet separated.

She continued doing well, and shortly after was discharged cured.

Case 2.—*Amputation of Thigh. Leg crushed by a heavy piece of timber.*—A consultation was held upon ——, a laboring man, whose leg had been broken by the falling of a heavy piece of timber upon it. The patient had been addicted to the free use of ardent spirits. There was a wound in front and another behind, through which the gastrocnemius protruded, for an inch or more, in a lacerated condition. He lost much blood, and it was supposed to come from the posterior tibial artery. The bone was very much broken. A large coagulum filled both wounds, and sponge had to be inserted to restrain the hemorrhage. The surgeon on duty, who was the first to see him, cut off the protruded and lacerated muscle.

A consultation was held thirty-six hours after the accident. His condition was feeble. There was sighing, with a sunken countenance. The foot of the injured limb was cold; the bone much shattered, and the fracture supposed to extend into the knee joint. Ice had been applied to the limb; there was no reaction about the wound. He had lost a great quantity of blood. Pulse feeble, and 120 in a minute. It was the unanimous opinion of the three surgeons, who were present, that no operation should be performed, but that opiates with brandy should be given, with as much nourishment as he could take.

On the next day, the six surgeons of the hospital met in consultation. The majority decided in favor of amputation of the thigh—two of them were of the contrary opinion. No heat had returned to the foot, and very little warmth even about the wound. His pulse was 120 and upwards. All thought that the condition of the patient was unfavorable, and that death might follow the operation, and, if he continued to live, that the operation would have to be performed.

The question was, whether then, or at some future time, amputation should be resorted to. The majority regarded the present as giving the best chance for recovery; that the limb was severely injured, and of itself was a cause of irritation; that the general constitution was depressed by it, and therefore it ought to be removed at once.

The minority thought that the symptoms of reaction were very slight, as indicated by increased warmth about the wound, and, therefore there was no cause for immediate interference; that sixty hours had elapsed since the injury, and he had not died of the shock, and probably would not; that the danger of sinking after the operation, if done at once, was very great, and would be lessened by a longer delay.

The amputation was performed on December 4th, 1852, in the circular method. Ether was administered. He fainted after the operation, but soon rallied.

On December 7th, his pulse was very quick, but he was cheerful. Did not see the stump, but was given to understand that it was sloughing.

He gradually sunk and died.

CASE 3.—*Amputation of Thigh. Caries of Patella. Synovitis,* etc. February 19th, 1853.—A consultation was held to-day, on a man who had a disease of the knee joint. An abcess had extended up the thigh, and had been opened, but it still continued to discharge. Before this opening was made he had suffered much, but since then had improved in health. Near to the patella were two fistulous openings, through which a probe could touch the patella, which was bare and carious. The probe could also pass under the patella, and consequently into the cavity of the joint. The patient was feeble, but not in a discouraging condition.

It was advised, in this case, that the patella should be removed, for this was the chief disease, and by its removal no additional evil would be done, for the joint was already opened; if this were done, a free opening would be made into the joint, so that the pus could escape readily, and not be pent up, to excite constitutional irritation: if no good followed this practice, amputation was still a remaining resource; that amputation of the thigh, of itself, was very fatal, and ought not to be too hastily ventured upon; extensive experience had shown that suppurating joints were abcesses, and ought to be treated as abcesses, in any other part of the body; that the free opening of them was generally followed by relief, and offered the best chance of saving life as well as limb.

The opposite opinion to this prevailed, and the limb was amputated. On examining the joint, after removal of the limb, it was proved that the patella alone was carious.

The patient died five days after the operation.

CASE 4.—*Amputation of Thigh. Chronic Disease of the Knee.*—Owen ——, aged 22, had been a long while affected with scrofulous disease of the knee. Some weeks before the limb was removed, he had a soft fluctuating swelling on the side of the knee, which was supposed to be an abscess of the joint; but, on being punctured with a grooved needle, no pus escaped, no evil consequences followed the puncture. His sufferings from pain before and after this were intense, and led us to urge upon him the necessity of amputation. Weeks elapsed before he could conclude to have it done. Pain, fever, and sweats had wasted his strength, and nearly destroyed all his resolution. In October, 1853, he consented to the operation, and, after a consultation, the thigh was amputated.

On examination of the affected knee, the synovial membrane was found thickened and pulpy, and in its midst an abscess was discovered. The abscess seemed to have its origin from an ulcerated condyle of the femur.

This man's lungs, before the operation, manifested dullness on percussion, and he was supposed to be tubercular.

In February, 1854, he had perfectly recovered, and grown fat.

CASE 5.—*Amputation of Thigh. Chronic Synovitis. Partial anchylosis, etc.*—Rosa ——, aged 27, was admitted into the Hospital, Oct. 18th, 1852, for synovitis. Ulceration took place in the integuments, and bare bone could be touched with the probe. Her general health failed, and the leg was bent at a right angle with the thigh. On October 5th, 1853, the thigh was amputated. Partial anchylosis was found. She recovered.

CASE 6.—*Amputation of Thigh. Gangrene of Leg. Closure of Iliac Artery.*— ——, a seamstress, aged 17, had lived for months chiefly on bread and tea. She had been ill, before her admission, with what she considered fever, yet she had abundant flesh, and did not resemble a patient who had suffered from fever. May it not have been acute arteritis?

She was admitted in October, 1853, with an acute gangrene of the foot, which continued to extend until it approached the knee. Her sufferings were very great. No pulsation could be felt along the course of the femoral artery.

The leg was constantly enveloped in flannels, wrung out in hot water.

On Nov. 12th, 1853, the line of demarcation having for several days been fairly formed, the thigh was amputated. Sulphuric ether was given to full insensibility. Only one small artery required to be tied, and this did not seem to be the femoral.

This woman had sloughing at the stump, and of the integuments at the groin, and died.

The iliac artery was found closed with a plug of coagulum.

CASE 7.—*Amputation of Thigh. Chronic disease.*— ——, a female, had been an inmate of the Hospital for many months, for a caries of the head of the tibia near to the articulation. The joint admitted of flexion and extension, and when the first consultation was called, it was not thought to be implicated. Several fistulæ led down to the bare bone.

It was recommended to introduce sponge tents into the fistulæ, so as to make pressure on the ulcerated bone. This was done, and in a short time a piece of bone, about the size of the last joint of the little finger, became detached, and was removed. More diseased bone was then felt. Her health became undermined, and, at a subsequent consultation, it was judged best to amputate the thigh. The limb was removed on the 4th of Feb., 1854.

The knee-joint was found to be only partially affected; there were fibrous adhesions between the patella and condyles of the femur, tibia was very little affected, and a cavity was found in its head, from which the piece of bone had been removed. There was no bare bone in the articular surfaces, and organized material covered the spot from which the piece of bone had separated. There was no pus in the joint.

If this woman's general health had continued good, there is reason to believe that she would have recovered with a stiff joint. She did well after the operation, and perfectly recovered.

Case 8.—*Amputation of Thigh. Accident.*—On February 1st, 1854, a young boy, aged 8 years, was admitted into Bellevue Hospital, with both thighs broken by the swinging of a heavy piece of timber against them. In addition to the fractured thigh, the right knee-joint was opened by being ground by the timber. This limb was broken at its middle. The accident happened at 12 m., and the thigh was amputated above the fracture at 9 p.m. He had suffered much from shock, but had fully rallied. Chloroform was administered. The periosteum was found to be stripped from the broken thigh for several inches above the fracture, so that it became necessary to amputate at the upper third. He died.

Case 9.—*Amputation of Thigh. Fungus Hæmatodes.*—George ——, aged 37, had always been in good health, until three years since, when he met with a railroad accident. Two of his ribs and right arm were broken, and he suffered from concussion of the brain. Two years of health followed, when he had syphilis. Some of his family have had phthisis, but none to his knowledge have had cancer. He is of very intemperate habits.

About four months ago, while drilling a hole in a rock, he was seized with a sharp pain just below the left knee. On examining the part, he discovered a swelling, about the size of a walnut, over the tuberosity of the tibia. This tumor was very tender to the touch, and occasionally, when not touched, he had lancinating pains in it, especially at night. It has rapidly enlarged, and became more tender until it assumed its present appearance. He is of good muscular development, face florid, no marked cachectic expression of countenance. Pulse 95, and full. Respiration rapid, 35 in a minute. Complains of a slight cough, which he has had for three weeks.

On the upper and anterior part of the leg, there is a tumor about the size of the two fists, nodulated, and of a dark venous color, near its centre there was a dark-looking fungus projection of small size, which bled on being roughly touched. The tumor was fluctuating, and when a grooved needle was introduced, it discharged a bloody serum. A probe could be thurst down to the bone, and the sensation conveyed to the hand was that which might be occasioned by the breaking of reticulated tissue, offering but slight resistance.

He was advised to have the thigh amputated at once, after waiting five days he consented to have it done. During this interval, the tumor was very painful, and he obtained very little sleep, even with the aid of large doses of opium. It grew very rapidly, and increased its lateral diameter so as almost to encircle the limb.

On May 25th the operation was performed. *Dissection of the tumor*: an incision was made through it and the tibia sawn longitudinally. The mass consisted mostly of coagulated blood. The cancerous growth was soft and irregular, and coagulated blood filled its divisions or interstices. Some parts of it approached to the condition of scirrhus. It was attached to the periosteum in front of the tibia, the bone did not seem to be implicated, nor were there any marks of disease in its interior. A large cancerous mass was also found on the posterior surface of the tibia, and united with the periosteum.

He was very much reduced for weeks after the operation, but now, July 15th, he is doing well. The cough has gone. The stump has healed, with the exception of a place, where the bone is exfoliating. He has gained flesh and color.

CASE 10.—*Amputation of Thigh. Caries of Patella. Suppuration of the Joint.*—Bridget ——, had been for months a patient at Bellevue Hospital. On admission, she had an ulcer over the patella, which finally exposed the patella. She was kept quietly in bed, the limb in splints, because it was anticipated that the joint might subsequently become involved. About six weeks before the amputation, synovial fluid could be pressed from under the integuments, and this was mixed with pus.

The skin which was undermined, was freely divided in order to give it a chance to heal. After this division, the joint itself was found distended with fluid. In a few days, a minute opening was discovered through which synovial fluid escaped. During this time, there was no constitutional suffering, and in order to avoid exciting inflammation the opening was not probed; but chills, fever, and local heat and redness were waited for, to indicate that the joint was suppurating.

In the latter part of May, pus and synovial fluid flowed out, and the joint became very tender and painful, and the pulse arose to 120. The opening was then probed for the first time. The probe passed directly into the joint. This opening was enlarged, so as to admit the passage of the finger into the joint. Pus, synovial fluid, and coagulated fibrine escaped. The under surface of the patella was bare, and so also were the condyles of the femur. The acute symptoms immediately subsided. On June 5th, the left side of the knee became red and fluctuating, and was opened with a knife, pus flowed out freely. There seemed to be now a prospect that she would do well. But she failed in strength, diarrhœa came on, and she began to suffer from bed sores, and in a consultation, it was decided that the limb should be amputated. This was done on the 21st of June.

On examining the joint, the bones which had previously been felt to be bare, were found covered with a velvety layer (granulations), with the exception of a small spot on the tibia, where the bone was still exposed. In fact the joint was healing, and if the patient's health had warranted longer delay, I feel confident that she would have recovered with an anchylosed limb.

I would now call attention to the similarity which exists between this case and case 3. In both, there was an ulcer over the patella, the patella in both became carious, and then acute synovitis followed with suppuration of joint. From these cases then we may conclude, that a carious patella must be regarded as a grave matter, for it may lead to suppuration of the joint, and endanger limb and life.

II.—AMPUTATION OF LEG.

Case 1.—*Amputation of Leg. Ostitis. Chopart's Operation and Amputation of Leg.*—Barnay ———, was admitted June 4th, 1850, with disease of the tarsal bones of the left foot, of twelve months' duration. About a year ago, after bathing in the river, where he remained longer than usual, he was seized with a severe chill, which was followed by pain and swelling of the foot. Blisters and poultices were applied, but did not afford any relief.

On admission, the foot was swollen to double its natural size, and there were three fistulæ, one of which communicated with the bone, on the inferior aspect of the foot. The use of the probe caused excessive pain, and could with ease be thrust into the substance of the bone. On pressing together the tarsal and meta-tarsal bones, great pain was caused. There was no pain in moving the ankle joint, or on pressing the os calcis and astragalus together.

No hopes were entertained of effecting a cure, and on the 13th of August, 1850, the operation of amputation through the middle of the tarsus, (Chopart's operation) was performed, in hopes of saving the heel. But after this operation, the astragalus and os calcis were found diseased, i. e. they were soft and compressible between the thumb and fingers. So soft were they, it was discovered that the knife had actually shaved off a portion of the os calcis, without meeting with resistance. Under these circumstances, it was judged wisest to amputate the leg at once, before he had revived from the effects of the chloroform.

The bones of the leg when divided with the saw, were found to be affected with the same disease. There was a rarefaction of the whole structure, and an attenuation of the outer crust. The cells enlarged, and filled with oil. The tarsal bones were enlarged, very oily and soft.

The wound united mostly by the first intention, and on September 15th, the patient was going about the ward. He perfectly recovered.

This case reminds one of the 1st case of amputation of the thigh mentioned above, and designated as acute ostitis. The thinning of their outer walls, the enlargement of the interior cells, their softness, the contained oil, and the severe accompanying pain, stamp them as identical diseases.

CASE 2.—*Amputation of Leg. Injury from blasting rocks.*— ——, aged 32, was admitted for an injury to the left foot, from blasting. The accident took place at noon. He then complained greatly of pain, and fifteen drops of Majendie's solution of morphine were administered.

The toes had been completely carried away by the explosion, the tarsa meta-tarsal joint of the great toe opened, the meta-tarsal bone of the second toe fractured, the skin entirely removed from the sole and upper surface of the foot, with the exception of a tongue of skin three or four inches wide, which extended over the outer malleolus and united the skin of the sole with that of the leg; the tendons lacerated, and the os calcis injured, by the detachment of several spiculæ of bone from it.

It was proposed at first to perform Chopart's operation, and thus give the foot a chance of recovery; but the flap was torn and thin, and on replacing it, was found insufficient to cover the ends of the bones. It was therefore thought to be best to amputate the leg.

Reaction had fully taken place, and the operation was performed at 8 o'clock P.M. Chloroform was administered by one of the physicians of the Hospital, whose experience in the use of this agent, is as great as any one's in the city.

There was nothing during the operation, which was worthy of note. The hæmorrhage was completely controlled by the tourniquet, and the only blood lost, was that which was retained in the limb below the tourniquet. There was no delay in any part of the operation. But during the application of the last strap, in dressing the stump, when the use of the chloroform had been suspended, and the gentleman who administered it had left, the patient was found pulseless and breathless. The windows were at once opened, artificial respiration resorted to, and some brandy which was at hand thrown up the rectum, and immediately after this an ounce of oil of turpentine.

He gasped, breathed, and the pulse returned to the wrist. But it was very feeble, and soon sunk again. The chest and abdomen were covered with mustard cataplasms. Punching under the left hypochondrium seemed to have more effect than any thing else in arousing him, for he would rally, start up in anger and remonstrate. After a time, he complained of the mustard, and asked for its removal. There was great disposition to sleep, and we had him removed to his bed.

He soon began to sink again, took brandy and carbonate of ammonia, and injections of turpentine and capsicum. The extremities were rubbed with camphorated oil, and hartshorn applied to the pit of the stomach. All were unavailing. He died at 2½ o'clock A.M., six hours after the operation.

The shock from the operation, perhaps, was somewhat instrumental in causing this man's death. But I cannot but believe that the chloroform acted injuriously, and that he might have lived if the chloroform had not been administered. Such is the impression left upon my own mind. The advocates for the use of anæsthetics would hardly be willing to make this admission. The French surgeons, some years since, first started the question of the utility of ether in primary operations, and several in this city have entertained the opinion, that after accidents it had a depressing influence, and consequently increased the chances of a fatal result. This opinion against these agents, in primary amputations is gaining ground, I believe, and especially against chloroform.

As to the assertion, that anæsthetics have the power of preventing shock, it may be said that it is doubtful. In this case, at least, it did not have this effect.

CASE 3.—*Amputation of Leg. Railroad Accident.*—Nov. 1st, 1853. Timothy ——, 22 years of age, was, while intoxicated, the night before, run over by the Harlem railroad cars. He remained on the track, undiscovered, for the space of three hours, and lost much blood before his admission to the hospital.

The anterior tibial artery was wounded, the muscles much torn, the bones extensively broken, and a number of fragments, of several inches in length, removed. No hopes were entertained of saving a limb so much injured as this; but the condition of the patient forbade its immediate removal. He was pale, cold, with an extremely feeble pulse, and irritable stomach.

Warmth and stimuli were administered, and at five o'clock P.M., reaction having returned, the leg was amputated. No chloroform or ether was used. He survived the operation about 24 hours.

CASE 4.—*Amputation of Leg. Railroad Accident.*—A young lad, nine years of age, had his leg crushed between a cart and a railroad car. It was amputated in March, 1854. Sloughing of the stump and protrusion of the bone followed. The dead portion was removed with the forceps. After a protracted period of three months, he recovered.

CASE 5.—*Amputation of Leg. Railroad Accident.*—Francisco ——, a Portuguese, from Madeira, a laborer, aged 54, of temperate habits, was admitted, April 21st, 1854, with a compound and comminuted fracture of the left leg. The accident was caused by jumping from the cars, when in motion, and the passing of the wheels over his leg.

Three hours after the injury, he was brought to the Hospital. He was much prostrated; the surface of the body cold, and the pulse easily compressed. The tibia of the left leg was broken into a multitude of small fragments, two of which had perforated the integuments. The fibula was also broken into a number of pieces, and the muscles and skin, in several places, lacerated. Over the inner head of the gastrocnemii, and just below the knee joint, the skin was torn for three or four inches, and the wounded muscle protruded through the aperture. Notwithstanding the amount of injury, the anterior and posterior tibial arteries could be felt pulsating, and sensation continued in the foot.

At five o'clock, P.M., it was decided that the limb should be amputated; but reaction not being fully established, the operation was deferred until 10 o'clock of the following morning. In the meantime, carbonate of ammonia and brandy were administered.

On the 22d of April, at the appointed hour, amputation was performed, just below the tubercle of the tibia. The single-flap operation was chosen, the flap being taken from the anterior surface of the leg, on account of the lacerated wound behind. The fibula was found broken above the place where the bone had been sawn, and, being loosened from its socket, was taken away entirely. Ether was used in this case.

He bore the operation well, his pulse neither failing in force or frequency. Throughout this and the following day, the surface of the body remained cool, pulse natural, and mind composed.

April 25th.—Had little sleep during the night; surface of the body cool; pulse 130; tongue dry and red; despairs of recovery, but is contented. The stump is painful, hot, and swollen, and shows signs of sloughing. The superficial veins leading from the stump are very prominent. We interpret this symptom to signify inflammation and obstruction of the femoral vein. Beef tea, quinine, and brandy, with morphine at night, were used.

From this time he gradually failed, and on May 3d died.

The femoral vein was much dilated, and contained within it a clot of fibrine. A large abscess was found between the vastus internus and os femoris. There was also a small quantity of pus in the joint.

SUMMARY OF AMPUTATIONS OF THE THIGH.

1.	Secondary	Ostitis, with necrosis	Recovered.
2.	Primary	Leg crushed by heavy timber	Died.
3.	Secondary	Chronic disease, caries of patella	Died.
4.	Secondary	Chronic disease of knee	Recovered.
5.	Secondary	“ “ “	Recovered.
6.	Secondary	Gangrene of leg ; clot in iliac artery	Died.
7.	Secondary	Chronic disease of knee	Recovered.
8.	Primary	Fract. of both thighs ; knee joint opened	Died.
9.	Secondary	Fungus hæmatodes	Recovered.
10.	Secondary	Caries of patella, acute synovitis, etc.	Recovered.

None survived the primary amputations, and ¼ of the secondary died. The mortality, in all amputations of the thigh, was 40 per cent.

SUMMARY OF AMPUTATIONS OF THE LEG.

1.	Secondary	Chronic disease of the tarsus ostitis	Recovered.
2.	Primary	Injury in blasting	Died.
3.	Primary	Railroad injury	Died.
4.	Primary	Railroad injury	Recovered.
5.	Primary	Railroad injury	Died.

Only one survived after primary amputation of the leg, and that with difficulty, and after a tedious convalescence. We find, on taking both tables, that, out of six primary amputations of the lower extremities, only one lived, which is a mortality of 83⅓ per cent., and that the mortality in the secondary amputations was 22 per cent. On combining both primary and secondary, we have a mortality of 7 in 15, equal to 46⅔ per cent., in all amputations of the lower extremities.

We had, for some time, suspected that amputation, in all cases, was a formidable alternative; and in view of the awful mortality, after primary amputations, we are tempted to ask, if it would not be wise to refuse to operate in all cases of severe injury?

ART. IV—*Cancer; the best local treatment, Compression; the best general treatment, Rigid Abstinence. Case of Scirrhous Breast successfully treated on these principles. New Surgical Instrument—Mammary Cancer Truss.* By M. L. KNAPP, M.D., late Professor of Midwifery, in Rush Medical College, etc., etc.

How happens it that so little is known of pressure in the treatment of cancerous affections? No mention is made of it in *Cooper's Surgical Dictionary*, the great work of reference that the medical practitioner is wont to consult when a rare case presents; no allusion appears to have been made to it in the late able report of Prof. Gross, on carcinoma, and no knowledge of its efficacy, I am confident, exists in the minds of professional men generally, for I have proved it by repeated conversations with physicians and surgeons, even professors of surgery, one of whom had been to Paris, in quest of professional knowledge. Now and then, one of the vanguard of the profession has told me he was aware of its utility, but had never tried it. I have not taken pains to refer to the standard systems of surgery, to see whether any thing is said of it or not. It is not taught in the lecture room, or there would prevail a knowledge of it among medical practitioners. Accident directed my attention to it. Having occasion to refer to the *Cyclopædia of Practical Medicine*, in the preparation of a medical paper last fall, I stumbled on the able paper of Dr. Carswell, on scirrhus, and having a case under treatment, gave the article a careful reading.

It appears by this, that pressure was used by Mr. Young, an English surgeon, many years ago—his cases having been reported and published in London, in 1816. Subsequently, M. Recamier, one of the physicians of the Hotel Dieu, of Paris, adopted the practice, and "of 100 patients treated by him, for carcinomatous affections, sixteen appeared to be incurable, and underwent only a palliative treatment. Thirty were completely cured by compression alone; and twenty-one submitted to the same means, derived considerable benefit from it. Fifteen got rid of the affection radically, by means of ablation alone, or chiefly by ablation, combined with pressure; and six by means of compression and cauterization. In the twelve remaining patients, the disease resisted all the means employed."

This is a better aspect of things, certainly, in regard to cancerous affections, than is generally entertained. The opinion prevails that true cancer is hopelessly incurable, and whether in private or hospital practice, if the progress and treatment of cases are watched, it will be found, I think, that little is attempted beyond early ablation, and later, palliative treatment.

Dr. Gross' report to the *American Medical Association*, presents a gloomy view of the subject, indeed, entirely at variance with M. Recamier's results. Indeed, under the full impression that his views reflected the true state of medical knowledge, I was about to abandon the hope of there being any relief for my patient, in whose fate I felt the deepest interest. I will briefly glance at his " conclusions on the value of surgical operations in cancerous diseases."

1. From Hippocrates to the present day, it is regarded incurable by escharotics, or the knife; nature never cures, and no hope from internal remedies.

2. Excision is nearly always followed by a return of the disease in a few weeks or months.

3. After ulceration, excision but hastens the fatal result.

4. If the tumor be of rapid growth, or large, excision but hastens death.

5 Operations for soft cancers still more hopeless than for scirrhus.

6. Of the cases reported, the history is too imperfect to afford basis for diagnosis.

7. Cancroid affections, as of the lip, less sure to return after ablation.

8. Notwithstanding the bare twilight of hope from ablation, in cancer, still, if done early, the profession are for it.

9. The cases reported cured are believed to have been tumors of benign character.

10. All agree, if ablation be resorted to, it is best to be thorough in removing all, even at the expense of healthy surrounding tissues.

11. Save enough integuments to cover, and heal by first intention.

12. Great stress laid by all writers on regulated diet, in preventing relapse.

13. No remedy or method of treatment known that will prevent relapse.

14. Occasionally a second operation has prolonged, and even saved life, but generally as useless as the first.

Not a word is said of the employment of any mechanical means for methodical compression, while Dr. Carswell, in the paper referred to, places it in the first rank of curative agents. The remedies that retard or arrest cancer, according to him, are direct or indirect. "Among the former, or those which operate directly, the local abstraction of blood, by means of leeches, and compression, holds the first rank." Of those operating indirectly, are short allowance of food, and those powerful alteratives that promote absorption. Thus an entire change is effected in the nutritive function, and rapid absorption promoted, both by suction into the system through a jejune condition of the blood vessels, and methodical compression upon the part after local depletion. Here is sound philosophy—pumping and forcing, pulling and pushing at the cancerous tumor, to get it back into the blood. While fluid, it is harmless; so long as it swims, and is not allowed to localize itself, all is well, even admitting it to be a disease of the blood.

This view of the treatment of cancer, presented by Dr. Carswell, is taken from M. Recamier's work, which I think has not been translated into English. I will, therefore, draw from it a few brief conclusions, as presented by Dr. Carswell, to stand alongside of those drawn from Dr. Gross' report.

1. The results of 100 cases treated in the Hotel Dieu, above quoted.

2. All tumors, benign, suspicious, or malignant, yield to the treatment.

3. Mammary tumors, put under this treatment before degeneration, will continue to recede, though the pressure be discontinued. If pressure is used after degeneration, and discontinued, the tumor again enlarges, and may be aggravated.

4. Compression aids in preventing relapse, after ablation.

5. Chronic inflammation is resolved by compression.

6. Tumors of the neck of the womb are resolved by methodical compression, by means of a conical thimble, or tube pessary.

7. The rational inference is, that if this practice were generally employed early in all external cancers, ablation would be seldom required.

The internal remedy most relied on by M. Recamier is *conium;* but *tonics* and *chalybeates* must be combined, to aid in governing the nutritive function, and to answer the indications of each particular case. About one-third the amount of food usually consumed by the patient is the allowance found most reliable. The decoction of sarsaparilla is the drink recommended. The alcoholic extract of conium, two grains, gradually increased to six, or even twelve, twice a day, on an empty stomach, and continued three or four weeks, is the form of administration of the cicuta.

Dr. Dunglison, in his note appended to this article, says not a word of compression, but remarks: "The cachexia is the real morbid condition, and the cancerous affections, in particular organs, are but so many evidences of it," etc.

Now, so far as treatment is based on this assertion, it must, if rational, err of its object. Nor do I think any cachexia precedes the local deposits. The cancerous matter seems to be the offspring of a redundant and pampered nutrition, and to be formed in the blood, and laid up (a blind and fatal mistake) by deposit, as fat is laid aside. The corpulent, or lymphatic habit, is most liable or subject to it. "In persons, too, apparently in the enjoyment of the most perfect health, we often see the disease making its appearance in the form of a small pimple, proceeding more or less rapidly in its course, extending in breadth and in depth, and terminating ultimately in death, in spite of all the means which art has devised." So says Dr. Carswell, and of the *cachexia* he speaks as follows:—"It is in this, the last stage of the disease, that the circulation and innervation become deranged, and that fever and a diminution of the nutritive function are first observed. It is likewise at this period, but more frequently a few days or weeks before death, that the skin assumes a pale earthy, or dully ochry tint; that debility and emaciation make rapid progress, and all the functions of the economy become implicated in the deteriorating influence of the disease. It is this group of the general symptoms which constitute what is called the *cancerous cachexia.*"

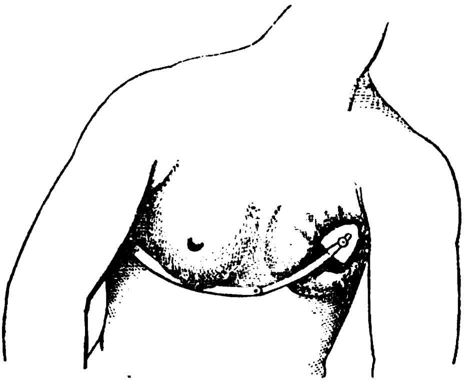
I say, then, to treat a case in high condition of general health with alterative tonics, nutrients, stimulants, etc., thinking to resolve thereby a local tumor, or true cancer, on the presumption that some latent cachexia lies at the bottom of it, would be a signal error. Starvation, almost, were more rational, and add to this compression, and hygiene in its most rigid requirements, and you reach the indications. Drugging with hydriodate of potash, etc., may resolve benign tumors, but it never will resolve malignant ones. I have little confidence in alterative drugging.

This matter or doctrine of a latent depravity, 'lurking in the constitution, and proving the cause of cancer, is as improbable as it is unphilosophical. The fact of cancer appearing locally, while the constitution is in full vigor, is far from being "evidence" of a cachexia, if Dr. Carswell has rightly explained what the cancerous cachexia is; but the cachexia is rather the witness-bearer or effect of "cancerous affections in particular organs." This is rational, intelligible pathology, and leads to correct treatment—opens the door of hope to the otherwise doomed victim. The other view is a mystification, a cloak for ignorance, a seal set upon any advance in practice, the pronunciation of the patient's hopeless fate. The propagation of such errors in medical philosophy, is what has so firmly established the general belief, that cancer is incurable, and that nothing can be done. That a particular temperament, or habit, or constitution, may be more liable to cancerous forms of disease than another, under a mode of living favorable to their development, is all that can be maintained by a sound philosophy, as inherent in the system. The doctrine of hereditary taint is a ball and chain upon the foot of medical progress. Like begets like organization. Like organization is liable to take on like pathological action, when its like physiological action is disturbed by like causes. This is all that can be maintained. Now, under this view, and the known power of regimen, or training, to entirely change the constitution—even the organization—no son of a cancerous parent stands in jeopardy, if his medical guide will put him in the right path, and he will but travel in it. The same of all other hereditary proclivities. This rational philosophy permits progress, stimulates science, and encourages hope.

CASE.—Mrs. M. J., of corpulent habit, florid complexion, sanguine-lymphatic temperament, aged about forty, and the mother of five children, consulted me on account of a hard tumor in her left breast, of the size of a hickory nut, in the fall of 1852. She had noticed the tumor during the summer previous, and a peculiar reclining of the nipple toward the arm-pit, or laying itself down on the tumor, which was close upon the axillary side of it, and situated deep in the substance of the mammary gland. Her breasts were well developed, and the glands retained a firmness of structure that gave evidence of a healthy and unimpaired constitution.

I put her under the administration of iodine locally and generally, making use of a tincture of double the usual strength for topical application, and painting the breast nearly all over, except in the more tender region of the nipple, thus obtaining a counter-irritant effect, and a peeling off of the cuticle, after a few days. This was regularly repeated about once a week. Its administration internally was continued for three months, in small doses—two or three drops twice a day, of the same tincture. No beneficial effect was apparent.

For a twelvemonth the tumor continued steadily to advance, when it had attained to about the size of a hen's egg; the sub-cutaneous cellular tissue had become involved, and adhesion to the skin was apparent from the puckering that it presented, on moving or handling the breast. Sundry nodulated protuberances could be distinctly felt. Shooting pains were frequent, and becoming more and more troublesome. At this juncture, December, 1853, the case was examined by two distinguished professors of the Medical College of Ohio, and their opinions accorded perfectly with my own, that the tumor was a true scirrhus.



The general health of my patient being perfectly good, and the gloomy prospect from ablation, as per Dr. Gross' report before me, and the more cheering hope from Recamier's practice presenting, I put the patient under restricted diet, five grains of the hydriodate of potash, twice a day, and local compression by méans of a pad worn in the body of her dress. This course was pursued two months with steadiness, when it became evident that the tumor was receding. The adipose tissue of the system was considerably reduced withal. Finding it next to impossible to maintain a uniform methodical compression upon the tumor, night and day, the power of an elastic steel spring truss suggested itself, and after repeated trials, I at length devised a perfectly adapted instrument, as seen in the above cut.

This instrument may be said to be a Hull's truss, with a joint in the front part of the spring, to adapt it to the specific purpose and location. The joint is rather firm, requiring considerable force to vary the angle, so that when a true fit is attained, it remains permanent. It thus adapts itself for either breast, and it may be worn equally as well with the spring encircling the chest above the mammæ, and the obtuse angle at the joint pointing upwards, in the centre of the sternum, and the branch descending to adjust the pad upon the tumor. The pad, in this case, may be represented by the longitudinal section, centrally, of a hen's egg, one half of it being adopted for the pad, the rounded, stuffed side worn upon the tumor. To prevent hurting the nipple, I found it necessary to lunate the heel of the pad. The power of the spring, when *in situ*, is about that of one pound pressure, perhaps a little greater, being made from sheet steel, No. 22, and three-eighths of an inch wide. The temper of the branch portion is left unset, so that it may be more or less incurvated for exact adjustment. The curvature of the whole spring must, of course, be adapted to the size and shape of the chest, so as to fit without pinching. It is worn over the chemise, except the pad in front passes under to be applied to the tumor accurately, the bosom of the chemise, and waist of the dress aiding in sustaining the truss in its proper location. A soft compress, or two, of fine linen, or muslin, wetted in water, is kept upon the tumor, under the pad. The back pad is made very thin, so as not to show through the dress, and rests upon the muscular cushions, or either, or both sides of the spine.

This admirable arrangement of mechanical powers to the object in view, I believe to be new, and of great value in this department of surgery. It may be adapted to any form of mammary tumor, large or small, and when it is considered that cancer of the breast is the most frequent form of external cancer, its importance will be duly appreciated. The principle may be adopted in other forms of external cancer, and a truss adjusted by any ingenious practitioner to meet the wants or exigencies of each particular case. It appears to be equally applicable to encephaloid, scirrhus, and colloid cancers, and not only to these malignant tumors, but also to benign tumors, as wens, etc., etc. Its applicability to aneurismal tumors is obvious.

I am aware that gum elastic bandages and gum elastic bags partially inflated, have been used in making compression in the treatment of mammary cancer. I tried them faithfully in the case under consideration, and found them troublesome, oppressive, and inefficient. I find, practically, the truss is infinitely superior. It is worn night and day with perfect comfort, retaining its position without fillets, or straps and buckles of any kind, and possesses a capability of adjustment equal to a pair of spectacles. The Messrs. Rees, of Cincinnati, surgical instrument manufacturers, were the makers of the trusses I used, and were very accommodating, and faithful in executing my designs, until perfect adaptation and artistic finish were attained.

This will doubtless be read by practitioners, who, at first thought, will be surprised at the idea of putting a truss on a cancerous tumor! The doctrine is not generally promulgated that such a course of treatment is called for, or even admissible. Still it is not only defensible, but in truth *the only rational treatment*. Cancerous tumors appear to progress slowly or rapidly, according to the solidity or laxity of the textures in which they are situated, as a general rule, other things being equal, and hence it is perfectly rational to oppose their progress of growth towards the surface, and tendency to point and become open cancers, by suitable mechanical resistance. So far from being irritated by the practice, they take it kindly and without complaint or remonstrance, judging from the single case I am recording. It is not necessary the pressure should be great, but constant; and I have no doubt, but that local depletion by means of leeches may be advantageously used simultaneously, as recommended by M. Recamier, but it is both expensive and troublesome, and, therefore, I omitted it, and trusted to low diet and wet applications instead.

To proceed with the further history of the case before us: it was about the first of March last, that I brought the power of a suitable truss to bear upon the tumor, after many repeated efforts and trials of mechanical skill. The patient had fallen away some under a short allowance of food, and a constant use of the hydriodate of potash. The conium was now substituted for the hydriodate, and a rigid adherence to a very abstemious diet insisted on. Not over one-third the usual *quantity* of food taken was permitted, but every indulgence of a reasonable nature allowed as to *variety*, indeed, variety was insisted on, and the best quality of food of its kind advised. This course was pursued about six weeks, when it became manifest that the general health of the patient was giving way under the use of the conium, or drugging system. Commencing with two grains, twice a day, of the alcoholic extract dissolved in water, and increasing the dose daily, the patient had now been about two weeks under the power of six grains twice a day, when the general distress of the system became evident, by subsultus tendinum in almost all the voluntary muscles, whether the patient were awake or asleep. The irritability of the muscles was so great, that I noticed repeatedly the quivering of a single muscle of the wrist or ankle, like a gib-sail thrown into the wind. Now and then, a severe and prolonged cramp would seize upon a muscle. This derangement of the general health of my patient by narcotic poisons I deemed unphilosophic, the true course appearing to me to be the maintenance of as high a state of the general health as possible, under so limited a diet as to promote active absorption. Accordingly I discontinued all drugging, and put the patient under the best system of hygienic rules I could suggest, such as early rising and walking, riding, rambles in the country, bathing, flesh-brushing, dumb-bells, visiting, and every possible method of agreeably engaging and occupying the attention; the diet being augmented to one-half the ordinary quantity taken. Under this regimen the patient soon rebounded from the downward tendency, and began to express the utmost gratification. I should have observed that, during the drugging period of treatment, in March, the menstrual flow ceased, the greatest regularity having always prevailed. This was a staggerer. The patient had not been enceinte for ten years, though in good health, and living with her husband in the most unquestionable harmony, and was content to believe that it was "the turn of life" with her, in which opinion I encouraged her, at the same time doubting the fact. Her health and spirits went on improving daily and weekly, and the scirrhus tumor kept receding and "flatting out," literally, until a sub-stratum of it, like a flat piece of shred leather, only remained. Since the first of May, she has seemed and felt perfectly rejuvenated. Always accustomed to a full diet and rather sedentary habits; she is completely changed in her feelings, and astonished that her greatest enjoyments now are those habits she never could adopt or find other than irksome, and destructive of daily comfort if indulged in, such as early rising and walking particularly.

About the middle of July, the fact of pregnancy became established by the motions of the fœtus being felt. It would appear, then, that this patient has been above the breeding point for the last ten years, and that her corpulency tended to the formation of cancerous deposits. There could be traced no hereditary taint whatever, admitting the truth of the old fogy dogma. It would further seem that nature, ever desirous to preserve the species, took alarm at the downward tendency of the patient's health, and determined, if possible, to cast off a shoot. At all events, conception took place, whatever the law of nature may have been, about which it may be idle, perhaps, to speculate.

The question of paramount interest, in this case, now is, What will be the proper course to pursue, when lactation takes place in the affected breast? The remains of the tumor are there, although there is a chasm in the gland, equal to the size of the truss pad, or one-half of an egg. The nipple is underlaid by the hardened margin of the indolent remains of the scirrhous tumor, and, though nearly liberated from its retraction, is still partially held by the contraction of the tissues. Inasmuch as this is a very important portion of the gland, the lactiferous ducts being conveyed to this point, and probably rendered impervious by the lesion present, what course will be most proper and rational to adopt for the welfare of mother and child? Should the future offspring be allowed to draw nutriment from this breast, provided the function shall be found to be but slightly impaired? Will the exercise of the function of the organ have a tendency to awaken and renew the scirrhus development? May mammary abscesses be rendered probable from obliteration of the lactiferous ducts? Admitting the doctrine of hereditary taint, would the child's chance of future escape be improved by removing it from the mother altogether, and substituting a wet nurse? Sundry interesting points are involved in the issues of this case, which, having no parallel precedents to govern my practice, will have to be met on what may appear to be the most rational and sound principles.

It is conceded that this case was a favorable one for success under this new method of treatment. How far it may be a type of scirrhus in general, I will not pretend to say, few cases having fallen under my observation; yet I am inclined to think it neither singular, nor unlike numerous others of this class of disease, that either run into open cancer, or are cut away by the surgeon, only to re-appear in the same or some other locality. At all events, the case is instructive, in the illustration it affords of the resources of mechanical surgery, and the efficacy of a rigid hygiene in fundamentally changing the constitutional habits. "One swallow does not make a summer," to be sure; but if this practice were acted upon *generally* by practitioners in the incipient stage of cancerous tumors, I have reason to believe there would be many swallows of this kind, enough to make a summer of promise and hope to a large class of otherwise doomed sufferers.

CINCINNATI, *August*, 1854.

NOTE.—In connection with the foregoing interesting discussion of the treatment of cancer by compression, we would remark that the author, though *original* in the adjustment of a truss to the tumor, with which to make compression, cannot claim *priority*. It appears, from Dr. Walshe's great work on the *Nature and Treatment of Cancer*, p. 209, that Dr. Neil Arnott, more than ten years ago, invented an instrument for this purpose, having attached an air-cushion, which is thus described: "His apparatus consists of a spring, an air-cushion supported by a flat resisting frame or shield, a pad, and two belts. The spring, which is of steel, is the compressing agent, its strength being varied with the amount of pressure it may be desirable to obtain. The shield, varying in shape, somewhat, with the circumstances of particular cases, is generally slightly convex on the external surface, of circular or oval outline, and formed of a rim of strong wire, connected at two opposite points by a flat piece of iron, which serves for the support of the spring, screws, etc., the whole being covered with jean. To the rim of this shield is sown a sort of conical cap of soft linen, designed to receive the air-cushion, to keep it constantly slack, and prevent it from slipping about when applied. The air-cushion thus kept slack, fashioned into a sort of double nightcap, lying in apposition with the inner surface of the shield, and sufficiently filled with air to prevent the latter from pressing directly on the part which receives within it the tumor to be compressed. One end of the spring is attached by screws to the external surface of the frame, and the other end to a solid, but soft pad, placed wherever the contre-pressure is to be made. The straps are used to keep the apparatus steadily fixed."

Dr. Walshe speaks very favorably of compression, and remarks that the chief reason why it has not taken its ground as a general system of treatment, is the difficulty of its application. This difficulty, he thinks, is triumphed over by the invention of Dr. Arnott.—[*Eds. N. Y. Jour. of Med.*

ART. V.—*Falls from Heights, with Cases Illustrative of some peculiar consequences of Cerebral Concussion, etc.*

By ELISHA HARRIS, M.D., Physician to the New York Dispensary.

THE following cases serve to exhibit some of the more unusual effects of falls from heights, while they happily illustrate the remarkable impunity with which such accidents are sometimes sustained, especially in young children.

CASE 1.—*Fall of a Child from a fifth story window. Fracture or Diastasis of the Segments of the Superior Maxillary and the Palatal Bones, with but slight Concussion of the Brain.*

J. M., a boy, æt. 2 years, while playing in the vicinity of an open window in the fifth story of a dwelling-house, about six weeks ago, was precipitated upon the pavement in the court-yard below—a distance of some fifty feet. When taken up, he presented the usual symptoms of concussion of the brain, but when first seen by the writer, a few hours after the accident, the little fellow was partially restored to consciousness, and, so nearly as could be ascertained, there had occurred no vascular reaction. His pulse was feeble, and he seemed greatly exhausted from the loss of blood which he sustained from the mouth and nostrils. Upon examination, the head was found to have sustained no injury externally, except a severe contusion over the left temporal and malar regions; but, in the mouth, it was discovered that the superior maxillary and the palatal bones had been riven asunder on the median line, and that the segments of the latter bone were so widely separated that I inserted my fore-finger in the cleft, the soft parts being torn from the alveolar margin back to the velum palati. The ethmoid bone had also suffered some damage in its inferior portion, but no further injuries were discoverable. For some days after the accident, deglutition was rendered somewhat difficult, by the excessive tumefaction of the soft palate and velum; but aside from this, no unpleasant symptom supervened until after the expiration of the first week, when considerable collections of pus formed above the palatine arch, and were discharged through the cleft. Some spiculæ from the ethmoid bone were thrown off in the process of this suppuration. The ductus lachrymalis of the right side has at various times become obstructed from suppuration in its vicinity, and has required relief. At the present writing, suppuration has nearly ceased, and it is proposed, as soon as practicable, to attempt a re-union of the cleft edges of the palate, so as to restore the mouth and nostrils to their normal relations. It is believed that this may be readily accomplished by means of Sims' clamp suture.

Case 2.—*Fall from a height of 60 feet. Grave Concussion of the Brain and Depression of Skull, with Symptoms of Cerebral Compression. Recovery after four days, without any sign of Vascular Reaction. An attack of Epilepsy six weeks subsequent to the accident. Final perfect Recovery.*

H. V., a boy, aged 11 years, in August, 1850, fell from the top of a new, unfloored building, on Broadway. His head struck upon a stone in the cellar, which caused a severe contusion of the scalp, and an apparently great depression of the skull. When taken up, he was found to be cold, and nearly pulseless, and in this condition, with a slight increase in the pulse, he remained for more than twelve hours, during which time he frequently vomited. The breathing was occasionally stertorous during this period, and the eye seemed insensible to light. At the time I was called to take charge of the child, 16 hours after the accident, I found him profoundly comatose, pulse feeble, and beating only 50 per minute; the pupil extremely dilated, and the eye insensible to light; the extremities cold, and the head hot. On the left temporal region there was a well defined contusion, but the areolar tumefaction was so great, that it was impossible to determine whether any fracture of the skull had occurred. He continued utterly unconscious and in a lethargic sleep, until the expiration of the twentieth hour after the fall, when he began to exercise the power of vision, but it was not until after 36 hours that he became obviously conscious. Until this time the pulse had continued very feeble and slow, ranging between 50 and 60 per minute, and the pupils had continued largely dilated. On the third day, the pupils became somewhat unnaturally contracted, but there was no marked vascular excitement, and the reaction, though complete, was so gradual as to be unobserved from hour to hour by the attendants. The period of reaction and restoration to perfect consciousness, extended from the 56th to about the 90th hour, inclusive. On the 5th day from the fall, though very feeble and excessively irritable, the lad appeared to be perfectly well. At this time, the tumefaction about the contusion had so far subsided as to enable us to determine the fact that there was a fracture of at least the outer table of the skull, and this fractured section was so much depressed as to render it highly probable, that the inner table was considerably impressed upon the brain.

The boy's health continued perfectly good during a period of six weeks after the injury, when he was attacked with epilepsy, which subsided after 48 hours, during which time he had three seizures. From that to the date of the present writing, he has continued perfectly healthy; though for a year or more subsequent to the injury, he was peculiarly nervous and irritable. The apparent depression of the skull has never been completely removed.

CASE 3.—*Fall, and violent Concussion of the Brain. Restoration to Consciousness on the third day. Recovery without any Vascular Reaction.*—J. M., a young man, aged 23 years, while engaged in adjusting a plank in an unfinished edifice, on Broadway, lost his balance, and was precipitated into the cellar below, receiving the force of the fall partly upon the left temple, and partly upon the left shoulder, producing a luxation of the clavicle at its scapular articulation. The cerebral concussion was extremely violent; the vomiting and supervening coma were marked. The pulse continued soft and natural, though somewhat slow. The pupil was contracted. He continued in the condition above described for thirty-six hours, when he began to awake to consciousness. After four days he was fully restored, and at no period was there any noticeable degree of vascular excitement or reaction.

Case 4.—*Fall of a Child, when playing upon an elevated platform. Concussion of the Brain. Sudden restoration of Consciousness, after ten hours of profound Stupor. Intellectual operations resumed at the exact stage at which they were arrested by the Fall.*—C. C., a girl aged 6 years, a few days since, while indulging in gay hilarity with her playmates, tossing and catching playthings to and from them, on the pavement below, failed to notice something that was thrown her, and while hurriedly seeking for, and inquiring about it, made a misstep and fell upon the pavement. The cerebral concussion appeared to have been violent, and she was watched with much anxiety until about the ten hours after the accident, when she, for the first instance, opened her eyes, and manifested signs of consciousness; then instantly jumping to the margin of her bed, she exclaimed: "Where is it?" "Where did you throw it?" and immediately commenced throwing little articles from her dress, exclaiming, "Catch these!" By these acts she was manifestly continuing those intellectual operations which had been so suddenly arrested by her fall from the platform.

No marked vascular reaction occurred in this case; the pupil was very much contracted during the first six hours of the period of concussion, the pulse soft and hurried; she vomited much, but did not open her eyes at any time until the moment of her sudden restoration to consciousness. Her recovery was perfect from that moment.

The peculiar point of interest in the foregoing case, induces me to give a brief sketch of a still more highly instructive case, as illustrative of some very important and interesting psychological laws. I received an account of the case some time since, while on a visit to the neighborhood where it occurred.

Case 5.—*Violent Concussion of the Brain. Entire loss of all Consciousness of any previous period of Existence, and of all former Acquirements in Knowledge. Recovery, with the Intellect* *in a Perfect, but Infantile Condition. Complete Restoration, after Several Months, of all former Intellectual Attainments.*—Rev. J. E., a clergyman of rare talent and energy,—a man of sound and extended education—while riding through his mountainous parish, was, by a casualty, thrown violently from his carriage, and received a violent concussion of the brain. For several days he remained utterly unconscious, and at length, when restored, his intellect was observed to be in a state like that of a naturally intelligent child, or like that of Casper Hauser, after his long sequestration. The good man again, but now in middle life, commenced his English and classical studies under tutors, and was progressing very satisfactorily, when, after several months' successful study, the rich storehouses of memory were gently gradually, yet very rapidly, unlocked, so that in a few weeks thereafter, his mind resumed all its wonted vigor, and its former wealth and polish of culture. For several years he has continued his labors as a pastor, and has suffered no symptom of cerebral disturbance.

I am informed that the first evidence of the restoration of this gentleman's memory, he experienced while earnestly attempting the mastery of the Greek verb, an intellectual effort well adapted to test the penetrability of that veil that so long had excluded from the mind the light and the riches of its former hard-earned possessions.

The reader will, perhaps, recollect several cases somewhat analogous to this, as mentioned by Hennen, Larrey, Sir Astley Cooper, and other surgical writers.

CASE 6.—*Leap from a third-story window, during an Attack of Puerperal Mania. Considerable Cerebral Concussion. Slight Injuries. Immediate and perfect Restoration from all Mental Aberration, and speedy Recovery.*—Mrs. M., aged 26, some ten days after confinement, resumed her usual household labors, and being a feeble woman, and of an irritable, nervous temperament, she had the misfortune to sink into a state of acute puerperal mania. She was not often violent, but being constantly tormented with the most terrific panophobia, she frequently made vigorous attempts to escape from her countless imagined adversaries. This state of things had continued about one week, when she leaped from a window of her apartment, in the second story, upon the pavement below. This act she repeated on several successive days, and on each occasion she was immediately secured, and quieted in her room. Again she repeated her efforts to escape; she leaped into the street, ran several blocks, entered a large warehouse, ascended to the third story, and fancying herself still hotly pursued by her foes, she leaped from a small ventilating aperture, through which she could scarcely press her way, and the narrowness of which served to break her leap, and cause her partly to fall upon a low shed beneath. She was severely stunned by the force of the fall—says that she "saw stars and felt very dizzy;" she was for a few moments insensible, but in a short time became perfectly conscious, and returned to her home clothed in her right mind.

It was immediately after this daring hegira that the writer first saw this patient, when he found her very much exhausted, timorous, but not particularly excitable; the countenance was placid, and the expression of the eye full of life. She expressed great joy and devout gratitude for her safe escape from the great perils of her frenzied flight and leaps, as well as for her delivery from the dreadful panophobia which had driven her to such heroic daring.

Her restoration to health was speedy and complete, and there has been no recurrence of any symptom of mental aberration. The question whether the sudden and happy restoration in this case was simply a result of the moderate concussion that the brain sustained, or whether the consequence of a more general shock, which the whole body suffered, or whether to be attributed to the enlarged and uncontrolled freedom that she enjoyed during her flight, the writer does not attempt to determine; though it appears highly probable that it was owing mainly to the cerebral concussion, for, on several previous occasions, she had made equally heroic attempts to escape, but never before had sustained any appreciable degree of cerebral concussion. She says that it was only in this broken leap from the third story of the warehouse, that she ever felt any stunning effect, or was for a moment rendered unconscious.

There are some interesting psychological facts involved in the history of the last three cases that we have here detailed, which we may discuss at some future time, in connection with other cases of an analogous character; but we would in this connection, only call attention to one or two of the more practically important facts observed in the history of these cases.

It was observed in the first four cases, that recovery from severe cerebral concussion took place without any marked vascular reaction, though no measures were pursued to prevent such an event. In the third case mentioned, the young man was laid in a darkened and cool parlor, the head frequently bathed, and a little ammonia and milk occasionally administered. In several cases of cerebral concussion, occurring in children, the writer has witnessed the happiest recovery under similar circumstances. But what might have been the history of these cases, had the old practice of venesection and local depletion been resorted to, we cannot say; but it is probable that there would have occurred some degree of violent vascular reaction, and possibly some subsequent, if not *consequent*, cerebral inflammation. Vascular depletion during the stage of shock or depression, manifestly may be, and I believe it has often been, the cause of cerebritis occurring after cerebral concussion.

In the history of the second case, we see illustrated the safety and propriety of waiting for the full developments of the facts and events in such cases of injury, with probable cerebral compression, before attempting surgical relief.

Lastly, we see illustrated in several of these cases, the wonderful impunity with which falls are sustained by children, the remarkable and wisely designed protection which the brain enjoys, and the happy capacity of nature to protect the most important organ of the body against perils to which it is exposed, as well as to restore it from the most violent injuries received.

ART. VI.—*Extracts from the Report of the Proceedings of the New York Pathological Society.* (Selected and prepared by Committee of Publication.)

Specimens and Cases, by A. CLARK, M.D., Prof. of Physiology and Pathology in the College of Physicians and Surgeons.

Heart Clots.—Prof. Clark presented a specimen of polypus of the heart, and remarked that he found so many of them that he could match all the polypi exhibited to the Society. This was not so white as others which he had exhibited, but it had the same kind of attachments. The man from whom it was taken was under observation but a few hours. He was very intemperate. Came into the hospital in the morning with pneumonia and capillary bronchitis, and died the same evening. This clot was found in the right side of the heart. One of the folds of the pulmonary valves was torn in two places. How this lesion occurred he did not know; it did not seem to be recent. The two openings through the valve could still be seen, one of which showed very well. An interesting point in regard to them, was that this polypus had insinuated itself into these openings, as also one higher up, and completely filled them. This clot was firm and somewhat more bloody than usual; he exhibited it as presenting the ordinary firmness of those usually supposed to have formed before death, though it had evidently occurred after death.

Waxy Liver.—Prof. Clark then remarked, that at the last meeting of the Society, he presented a specimen of what was sometimes called *waxy liver*. These specimens were rare, but he now had another to exhibit. The appearance was very much like that of the one formerly exhibited. This specimen, however, differed somewhat from the other, as a few of the cells contained a small amount of fatty matter, while the larger part of them are free from fat and seemed to be a new production. He supposed this ought to be called the "waxy liver," and yet there seemed to be some diversity of nomenclature. The "scrofulous liver" would perhaps better bring it within the range of the description of such cases. In this instance, however, there did not appear to have been any scrofula. The person from whom it was taken, had syphilis at the time of her death. The point of interest was whether she had syphilis and had been long treated with mercury, or whether she had scrofula. The specimen presented at the last meeting was a very good illustration of this point, for the man had scrofula as seen from two large ulcers under his arms, and also had had syphilis and had been treated actively with mercury. In both instances there was a considerable amount of abdominal dropsy; in the last it was extreme, and was supposed before death to depend upon cirrhosis, but on post mortem examination this condition presented itself.

In regard to the character of the deposit, he did not think that any writer had fallen upon its true nature. Dr. Bennett had probably come nearer to it than any other writer, and he seems disposed to conjecture that there was a change produced in the cells of the liver after the absorption of fat; that it was a later stage of the fatty degeneration: that, in truth, the oily matter had been taken up and the fatty cells left. Dr. C. did not regard this as a fair explanation. It seemed to him that by the enlargement of this liver, producing the hardness observed in it, a new production of a peculiar nature resulted. He thought these cells were not deposited like ordinary cells in the tubes, but that they were diffused, obeying no particular rule. To enforce this statement he introduced a portion of the mesentery for the purpose of exhibiting the glands. These were swollen, many of them, of the size of a bead, were easily turned out from their beds; they were not remarkably hard, having no appearance of any heterologous deposit like tubercles, but still they were enlarged and pale. He found exactly the same material in great abundance that was observed in the liver; the cells were not found in the tubes, but in the fibrous tissue. The stroma of the glands running between the tubes seemed to be infiltrated with these cells. In order to ascertain if possible the nature of this deposit, whether it was a peculiar form of fatty degeneration or some new undescribed form, or, whether the reaction of chemical agents would be the same upon animal tissue, he treated sections of the part containing the cells with rectified sulphuric ether, in expectation, if it was fatty, that it would be dissolved. No change whatever was produced. He then employed boiling ether, but still no change was effected. They were next treated with strong acetic acid; this seemed to render the cells more transparent, but they remained entirely unchanged in form. This maceration was continued for an hour, and to be sure that the experiment was well performed, he placed a quantity between two plates of glass, but observed no change in their form, though the tissues about them were much more transparent, the fibres being then less distinctly visible than before. He then macerated them with boiling alcohol, which produced no change, though it reduced the sections to the consistence of spermaceti. Finally they were treated with nitric acid of various strength, and it was observed that, when the acid was sufficiently strong to dissolve animal fibre, they did change, but when it was of less strength, they did not. This proved that they were animal in structure, and of a peculiar and undescribed form. In regard to their distribution, he said that they were so evidently distributed outside of the tubes and in the midst of the fibres in the glands, that the opinion which he had formed from the examination of the liver alone was probably a correct one.

Adherent Pericardium.—Prof. Clark exhibited a heart with the pericardium attached, which had been the seat of pericardial inflammation. The effusion of lymph was seen on both surfaces. There were two points of interest in the case; one, that it was associated with Bright's kidney, and meningitis, the last disease being apparently the fatal one. The second point was that, while attempting to catch the friction sound, he observed that at the height of an inspiration he could hear the second friction sound, while in the other portions of the respiratory act he could not hear it at all. He then directed the patient to take a full inspiration and hold it while he listened, when the increased distinction was so marked that no one could fail to recognize it almost instantly. The second sound was clearly developed by the procedure, while it was scarcely recognized in ordinary respiration. It occurred to him that this might be accounted for by the fact that the air, when we hold it in our lungs, is placed under considerable pressure, particularly when the lungs are partly filled, and, as a consequence of that, there would be a closer apposition of the pericardial surfaces than under circumstances of free respiration. He had had two opportunities, since this case occurred, of verifying this observation. In one it was perfectly clear, and in the other entirely absent. One was connected with a considerable amount of serous effusion, so much as to make the somewhat pear-shaped tumor which is frequently observed. This man did not give the peculiar sound at all; it could not be perceived at any period of the disease that these particular sounds could be heard any more distinctly in one portion of the respiratory act than another. But in a child suffering from pericarditis, he noticed that when it took a full inspiration the friction sounds did not seem to be very much heightened, but when it took a half breath they were heightened.

Prof. Swett remarked that he had never seen an allusion to this method of obtaining the second friction sound, but he had very recently had a case in which he observed that the friction sound became intense just at the end of an inspiration. He also had a case under treatment, in which these sounds came out clearly just at the end of an inspiration, but were not distinguishable at other times; he had not, however, made it the subject of reflection. *April 13th*, 1853.

Chagres Fever complicated with Pneumonia and Bright's Disease.—The patient, a man, was received into Bellevue Hospital, suffering from Chagres fever. At the time of his admission, it was not known that there was any complication. He was in the Hospital about two weeks. Two days before his death, it was observed that his respiration was difficult, and that he was becoming stupid. The house-physician discovered, on examination just before death, that he had pneumonia, and that his legs and hands were swollen. His urine was tested, and an appreciable quantity of albumen was found, so that he had Chagres fever, pneumonia, and what is called Bright's disease. On post mortem examination, two days after these facts were noticed, it was found, that the left lung had undergone a very marked change, but the appearances were so little like ordinary pneumonia, that the house-physician concluded that his diagnosis was not correct. The lung was not crepitant in the least, though it was soft and flabby; about two-thirds of the lung, was in the condition described by Cruveilhier, as carnification. It was evidently the result of pneumonia, but probably the exsanguinated state of the patient interfered with the full development of hepatization. There was a small amount of fluid in the pleural cavities, which was probably effused during the last hours of life. The liver had the bronze color that is so common, but it could be bent about and rolled into a mass. If it hung over the edge of the table, it would hug the side like a wet rag; it was a little under size weighing three pounds and three ounces. The heart had undergone very much the same kind of softening as the liver, and was of a yellow hue; it bore a striking resemblance to hearts which have undergone fatty degeneration of the muscular tissue. The spleen ran away from the hand like water; half of it was absolutely fluid, while the remainder was so soft, that it could be broken down into a pultaceous mass. The softening was much more marked than it is ever seen to be in typhus fever. Another remarkable point, was the condition of the kidneys; they were very small, of a dark hue, and together weighed seven ounces. The first kidney opened, gave exit, without pressure, to pultaceous matter resembling that which escapes from the spleen in bad cases of typhus; the color of the cut surface, was brown mingled with gray, and in the latter were observed the granulations of Bright's kidney. The other kidney was not at that time opened, but on pressing it, the fingers would nearly meet from the opposite surfaces; the capsule contained gas of some kind, which must have resulted from decomposition, as it could not be forced out. The autopsy was made 36 hours after death, and it could hardly be supposed that at this season of the year, would have commenced so early. The structure of this kidney was the same as the other, except that the degree of decomposition was somewhat less; the tubular portion was much less diseased than the cortical, and retained a good deal of its natural appearance. On examination with the microscope, the tubes were all found to be very granular, though there was no fat in them. It was not fatty degeneration then. The tubes were filled with granular matter, and there was not a single secreting cell in the whole of this pultaceous mass. Every cell had lost its nucleus, and the old cells seemed to have been changed or discharged by the bladder, and new cells in the debilitated state of the system, could not be produced. The cells were not round, but elongated in both the tubular and cortical portions, and were filled with a new and distinct form of cell lining. There was no pus, or fibro-plastic cells in the tissue. *April 27th*, 1853.

Apoplexy.—Thomas Connell, aged 48, native of Ireland, laborer, was admitted to Bellevue Hospital, on the 17th of Oct., 1853. As nearly as could be ascertained, the patient must have been drinking very freely for some weeks previously, but his health seemed to have been good up to the week before his admission to the Hospital. Neither he or his friends could give an intelligent account of the commencement of his sickness. On admission he was delirious, and walked with an unsteady gait, having much the appearance of a man intoxicated, but on examination he was found not to be in that state. Soon after being put to bed he became quiet, the pupils were contracted, pulse slow, small, and compressible, numbering 50 per minute. The skin was rather cool; he coughed a good deal, and a physical examination proved the existence of general bronchitis. The breathing soon became sterterous and he could not be roused. He was ordered half an ounce of brandy and a stimulating expectorant. Oct. 18th. The pulse had risen to 65, and was full and strong; the pupils were still contracted and insensible to light; tongue brown and dry. He ate moderately, and when asked how he felt, replied, "very well," but was still unable to give any account of himself. His bowels had not been moved since his admission. The brandy was discontinued, and an ounce of castor oil given; three grains of quinine were also ordered. He continued in this condition until the afternoon of the next day, when he again became apparently comatose, the pulse falling to 40 beats per minute, and the breathing becoming loud and sterterous.

On the 20th, his condition was much the same, but during the night it was again found necessary to give him brandy, the pulse having become scarcely perceptible. This alteration of symptoms continued, unimproved by tonics and stimulants, and he sunk rapidly and died on the night of the 21st.

Autopsy, 13 *hours after death.*—The dura mater was found much darkened by congestion of its blood vessels; between that membrane and the arachnoid, over the summit of the cerebrum on each side, there were two and a half ounces of uncoagulated blood enclosed in a patch of false membrane. The upper surface of the brain was much flattened by compression; the lungs and heart were healthy; the kidneys were congested but otherwise natural; the other viscera healthy.

Dr. Clark considered the occurrence of coma with stertor so markedly intermittent, as to lead to its being attributed to the congestion of intermittent fever, and for which quinine was administered, as one interesting fact in the case; and the effusion of blood which did not coagulate, and which may have been effused a week before admission, another. The effusion seemed to have been into the cavity of the arachnoid, immediately underneath the dura mater, and to have formed for itself an investing membrane. On close examination of the dura mater, he could separate a layer which he believed to be the arachnoid; if this be the case, then the whole dura mater covering the effusion, is lined by the arachnoid, and it is impossible to account for the membrane which encloses the unaltered blood, lying unattached to the cerebral arachnoid, unless we consider it false membrane, and yet the tissues investing the blood would scarcely appear to have been formed in 6 days. The limiting membrane was useful in preventing the farther extravasation of blood, and favoring subsequent absorption. He could scarcely suppose that the arachnoid could be separated into layers, one of which should embrace the cyst.

Hypertrophied Heart.—This specimen weighed 32 ounces; the chief enlargement was in the left venticle, caused by disease of the aortic valves, two of which were so thickened and attached to the aorta as to admit of regurgitation. The patient was examined in the last stages of the disease, when diagnosis of the valvular lesion had become, as is usual, very difficult. Dr. C. remarked that he had been making some investigations to determine the mode of development in these cases of hypertrophy of the heart. He had taken a healthy heart weighing 9 ounces, and compared 50 of its fibres with 50 from this hypertrophied heart weighing 32 ounces. If there had been an increased development of fibre, those of the hypertrophied heart should measure under the microscope three times as much as those of the normal heart, whereas they did not differ materially in size. The conclusion would be, therefore, that the growth of muscle demands the development of new fibre.

Encephaloid Disease in a Child.—The child was fifteen months old, and had been affected some four months with marked symptoms of tabes, but had suffered from general ill-health for a much longer period. The tumor became evident to the touch within the last three months. The mass occupied the whole of the abdominal cavity, and pressed up the liver, and with it the diaphragm, thus encroaching greatly upon the cavity of the thorax, and extended downward into the pelvic cavity, and was prolonged on the left side through the abdominal ring. On opening the abdomen two very large tumors were discovered, one fluctuating, and the other persistent. From the fluctuating mass flowed a wash-hand basin full of contents of a semi-solid consistence, similar to softened brain, and some of a more fluid glaring character. The mass appeared to be enclosed in the layers of the mesentery, though it involved other abdominal organs; the left kidney is affected, but the right is not; the liver is not involved, though there is a nodule near its free edge, which, from its color and other characters, is probably tubercular. Regarding only the many distinct tumors, enlarged mesenteric glands, and the miasmatic condition of the child, we might be led to consider this a very ordinary affection; but when we notice that the left kidney is involved, the immense size of the mass, its implicating many structures, and its rapid growth,—a different conclusion as to the primary origin of this disease may be arrived at. He was disposed to believe that it originated either in the mesentery, or left kidney. There can be no doubt that the disease is the softest variety of encephaloid; the fluid was transparent and ropy, with rounded, granular cells, somewhat smaller than those in the mass. These cells have a diameter somewhat larger than blood corpuscles. The interesting points are: 1, the development of so large a tumor in so short a space of time; 2, the uniform character of the large mass; 3, the resemblance between the fluid and solid portions of the disease under the microscope.

Scirrhus (?) *Pancreas.*—Specimen presented by Dr. Clark, for Dr. McPhail, of Brooklyn, with the following history: This patient was a married woman, 37 years of age, and the mother of five children. She first came under my care some three months since, laboring under dropsy of the abdomen and lower extremities. The kidneys were deficient in action, but the urine secreted was not albuminous; the bowels were constipated, consequent upon deranged hepatic functions. She had been living for more than a year in a very malarious district, some four miles from the city of Brooklyn, and all her children had there contracted intermittent fever. She presented the peculiar appearance of one resident in such an atmosphere, but had not suffered from febrile disorder. In the course of my attendance, I had to tap her upwards of six times, drawing off at the first operation about twenty-eight pints of a highly albuminous fluid. The medical treatment was directed to improve the condition of the liver and kidneys, without, however, much benefit. Only within the last ten days had she become jaundiced; but bilious vomiting was of frequent occurrence during the last month of her existence; still, she had long presented signs of gastric derangement, as nausea, eructations, red and glassy tongue, &c.

Autopsy.—Body emaciated, and deeply jaundiced; abdomen and lower limbs dropsical; peritoneum presented traces of inflammation; small intestines generally congested; liver much enlarged, indurated, and of a lighter color than usual; spleen somewhat enlarged. The pancreas was indurated, and thought to be scirrhus throughout, the thickening and hardening extending up along the common duct, and involving the tissues surrounding the gland, and the portal vessels. The kidneys were enlarged and congested; thoracic viscera healthy.

Dr. Clark remarked that, though the pancreas was enlarged and hardened, yet the disease was not malignant scirrhus. All the natural tissues of the pancreas can be found. It seemed rather a variety of hardening, and is worthy of exhibition as an additional illustration of the variety of true malignant disease in this situation. He did not remember to have seen a case where scirrhus began in the pancreas, though such cases are on record; he believed that the change in the specimen under consideration was often mistaken for malignant disease. The dropsy was probably the mechanical result of the constriction of the portal vessels by the enlargement of the pancreas. The kidneys are large, but have not undergone any of the changes of Bright's disease. The stomach shows some of the little prominences spoken of as polypi; it would not be difficult to suppose these growths were malignant, if the pancreas had undergone a similar change. They are made up of ducts, vessels, and fibrous tissue, and nothing else, so far as he had examined them. The ducts are similar to those noticed in the stomach, and all communicate with a single tube; this tube penetrates the whole depth of the fibrous mass, which would seem to be little more than a gland, accessory to the performance of the functions of the stomach. *Nov. 9th*, 1853.

Syphilitic Vegetations.—These were removed from the vulva of a female. A careful examination of their microscopical structure showed them to be chiefly epithelial, of the variety usually found in the vagina. The cells are so closely packed as to resemble fibres, but they are distinguishable on close inspection. Besides these cells, there are a few free cells of small size, appearing to be nuclei. They contain a small amount of fibrous structure, and a few blood-vessels. *Dec. 28th*, 1853.

Specimens and Cases. By J. T. METCALFE, M.D., Physician to Bellevue Hospital.

Retention of a dead Fœtus, four Months in the Uterus.—Dr. Metcalfe presented a small fœtus, supposed to have died at the third month. It was passed by a lady who had several children, and one previous miscarriage; she was very healthy and well-formed. She became pregnant about the first of last June, and progressed favorably nearly four months. Somewhere between the third and fourth month, her husband was taken suddenly ill, and she was very anxious on his account. She noticed that, for two weeks after this, the size of the abdomen continued to increase; but after that time it did not increase, but began to diminish, and continued diminishing, until she regained her natural size, and she concluded that she had been mistaken. The only change from her normal condition, which she had observed, was the cessation of the menses, and this swelling of the abdomen and its subsidence. There was no discharge from the vagina of any kind. Six weeks ago, he was called to visit her, as she had passed something while urinating; it came away without pain or premonition; she merely felt something in the vagina and removed it. On examination it appeared to be a very small fœtus, with an umbilical cord six inches long. The head bore a striking resemblance to a duck's head; the occiput and brain were in a tolerably fair state of preservation. She noticed, at the time of its expulsion, an offensive discharge from the vagina, and in a short time the placenta and a putrid mass were discharged. The next day she was perfectly well, with the exception of a slightly offensive discharge, for which she used a solution of chloride of soda. She continued well for four days; at the end of the fifth day she had some hæmorrhage, which required no treatment, except rest. The case was interesting, from the fact, that the dead fœtus was retained four months in the uterus without producing any sensation whatever, or any influence on the general health; that during this time, there was a collection of fetid fluid in the uterus, that the abdomen diminished, and that hæmorrhage came on so long after the expulsion of the fœtus. The expulsion of a fœtus, under these circumstances, seems generally not to be followed by hæmorrhage, though it it is frequently followed by a little offensive discharge. The lapse of time occurring between the death of the child and its expulsion seems to be very variable. He knew one instance where eight years had elapsed between the two periods. He supposed that after death it was partially absorbed; the anterior part of the belly, in this instance, was absent. *April 13th*, 1833.

Aortic Disease.—The patient was a German laborer, 65 years of age, of temperate habits, but subject to rheumatism and debility, attended by a slight cough. Dr. M. found him in his service, and understood that he was suffering from chronic bronchitis; and as he was reported to be improving, he made no examination of his chest. The house-physician, however, examined him repeatedly, not being willing to attribute his sufferings to bronchitis alone. But physical examination threw no light upon the case; the patient never complained of any symptoms which might lead to the suspicion of aneurism. On the 31st of May, he was suddenly seized with hæmatemesis, and vomited about two quarts of blood within six or eight hours, when death occurred. On examination, all the organs were found healthy, with the exception of the aorta. The heart was in every respect normal. An aneurism about the size of a hen's egg rested upon the vertebræ, and had caused their absorption.

Ulceration and Perforation of the Ileum.—The patient, an American, 23 years of age, was admitted on the 25th inst., into Bellevue Hospital, in a moribund condition, and died within 10 hours afterwards. His habits were intemperate, and he had been ill for several weeks, suffering much from pain in the abdomen, and lately with diarrhœa. Although nearly comatose, on admission he showed signs of pain when pressure was made on the abdomen. On making the autopsy, the ileum was found to be ulcerated and perforated. The ulceration commenced about six inches above the ilio-cæcal valve, and the bowels were agglutinated together in the neighborhood. Peritonitis was general without suppuration, and some feculent matter had escaped into the peritoneal cavity. The ulcers resemble those met with in dysentery, their general direction being transverse.

Prof. Swett considered these ulcerations, if not the result of tuberculosis, extremely interesting. He remembered a patient having a slight diarrhœa, and not thought to be dangerous, suddenly attacked with a tremendous hæmorrhage from the bowels, of which he died in two hours. A post mortem examination discovered several ulcers in the ileum near its termination, one of which had perforated a vessel of considerable size. The ulcers were no larger than peas, and had no connection with any typhoid fever. *June 9th*, 1853.

Specimens and Cases. By HENRY G. COX, M.D., Physician to the Emigrant State Hospital.

Pericarditis in an Infant.—Dr. Cox presented the heart of a child 11 days old, who died with pericarditis, and the ovaries of a child 13 days old. The first child was apparently healthy at birth, but on the fourth day had a convulsion, with labored respiration, skin becoming alternately livid and clear, and nursing only occasionally. There was an indistinctness of the sounds of the heart, but nothing else abnormal was observed. On post mortem examination, the pericardium was found to be filled with serous fluid. In upwards of fifty post mortem examinations of children of about this age, he had never before observed appearances of pericarditis. The general symptoms might have been due equally to imperfect closure of the foramen ovale, or deficient aeration of the blood.

Ovarian Dropsy in an Infant.—The child from whom the ovaries were taken, was healthy and well nourished, had a healthy mother, and nursed regularly; convulsions occurring at intervals, was the first unfavorable symptom. The bowels acted well, every organ seemed to be in its normal condition, yet it died on the second day after the occurrence of the first symptoms. On examination, all the organs were found healthy, except the uterus and the ovaries; the former was dilated, and the os was as large as that of a child ten or twelve years of age; the latter were dropsical, the fluid being clear and transparent.

Dr. Elliott stated that he had made the post mortem examination of a child, at the Lying-in-Asylum, which died 36 hours after birth, and had the symptoms of cyanosis, though not perfectly well marked. Dr. Isaacs and Metcalfe were present at the autopsy, and recognized the appearance of well marked endocardial inflammation. The septum auricalare was distinctly thickened and gritty to the feel, and the foramen ovale was patulous. *May 11th*, 1853.

Enlarged Spleen of an Infant, following Intermittent Fever.—Dr. Cox exhibited the enlarged spleen of an infant five weeks old. Two weeks before confinement, its mother had suffered from intermittent fever, which disappeared before labor, and returned again a week after her confinement. When four weeks old, the child had an attack of intermittent fever; the cold stage was short, but the hot stage lasted eight hours. Quinine was given to both mother and child, the latter taking three-fourths of a grain every three hours. During the following week the child had two convulsions, for which iodide of potassium was given; but it sank and died. On examination the lungs and heart were found healthy; liver congested; spleen enlarged.

Dr. Cox remarked that during the present year he had seen 17 cases of intermittent fever, occurring in children from five weeks to three months old.

Hydrocephalus Internus.—The patient was a female infant, aged 18 months, of German parentage. The mother stated that it was her tenth child, and was well until it reached the 16th week, when it became restless and feverish, and the head began to increase in size, and in eight weeks it became nearly as large as when admitted into the Hospital. It never had convulsions, and passed through the period of dentition without inconvenience, excepting a little diarrhœa. One of her children had died of convulsions, the remainder were still living. Her father and mother died of apoplexy, at the respective ages of 65 and 56. The father of the child is in good health. The treatment consisted of generous diet, and the iodide of potassium with tonics. The patient continued to decline, and died eight days after admission, without convulsions or any other symptoms.

On post mortem examination the anterior fontanelle was found unclosed, and the sagittal sutures unossified. The vessels of the brain were congested, and some of the cerebral convolutions nearly obliterated. The hemispheres separated from the weight of the fluid, which gave exit to 20 ounces of limpid serum from the lateral ventricles. The hemispheres were distended like two sacs, their walls at some points being not more than one-eighth and at others one-sixteenth of an inch in thickness. There were no floculi in the fluid; the lining membrane of the ventricle was thickened; no granulations or roughness was found about the corpora striata or elsewhere; the choroid plexus was not anæmic. There were no tubercles in the lungs, liver, spleen, or kidneys, nor were the mesenteric glands enlarged. A circumscribed point of pneumonia existed in the lower lobe of the right lung; it was in the second stage. *Oct. 26th*, 1853.

Specimens and Cases. By Lewis A. Sayre, M.D., Surgeon to Bellevue Hospital.

Cancer of the Stomach.—The person from whom the specimen was obtained, was originally a Canadian, a very robust, energetic, enterprising man, who had always enjoyed good health, until about six months since, when he met with some severe losses, after which he became melancholy. He had slight dyspepsia, but was not treated for it until he began to emaciate, and even then there were no symptoms present which led to a suspicion of his disease. He never vomited from first to last. He became more and more reduced until he was little else than a skeleton; still he was supposed to be suffering from phthisis. He went to a Hydropathic Institute in this condition, where he first came under observation, then in a dying condition. On placing his hand upon the region of the stomach, Dr. S. discovered a tumor which he decided to be cancer. On post mortem examination two or three quarts of serous fluid were found in the abdomen; the peritoneal surface was completely covered with little tuberculous masses, some of which were as large as a pea. The stomach and pancreas were agglutinated into one solid cancerous mass; the pancreas had well nigh the hardness of stone. The intestines were matted together and thickened; the colon was not larger than the thumb.

Resuscitation of an Asphyxiated Infant.—Dr. Sayre narrated a case illustrating the beneficial effects of artificial respiration in the management of asphyxiated new-born infants. The child in this instance was born at half past twelve o'clock. By passing a tenaculum through the tongue and drawing it out, he succeeded in passing a male catheter into the larynx, and by ten minutes to three, respiration was established, and the cord from which no blood had as yet escaped, was ligated. The child lived three days and died in convulsions. *April 13th*, 1853.

Cancer of the Stomach.—Mr. Doyle, æt. 35, originally of good constitution, active and robust, of regular habits, but latterly dissipated, and liable to commit great excesses in diet, which caused great enlargement of the abdomen, was suffering, when first brought under observation, from dyspeptic symptoms. These had already continued eighteen months, for which he took different remedies. His health continued to decline, and four months since he was obliged to give up work; he could not retain any thing on his stomach, and in consequence became greatly emaciated, pulse feeble in the left wrist and absent in the right, and there was a strange appearance of venous congestion on one side of the trunk. A tumor could be felt above, and to the right of the navel. The diagnosis was scirrhus of the stomach. He died three weeks afterwards, and an autopsy was made 10 hours after death. The whole trunk, both lower extremities, and the right arm presented externally much congestion, and many points of extravasation. The small intestines were perfectly empty and dwindled to the size of the finger, and the colon was but little larger. The patient had not had an evacuation of his bowels for three weeks, and had vomited incessantly until within nine hours of his death. The liver, kidneys, and spleen, were entirely healthy. The stomach was distended with about a quart of fluid which had probably accumulated during the last hours of life. The inferior portion of the stomach and the pyloric orifice were the seat of cancer, so constricting the opening as to render the passage even of liquids difficult. The man's father, mother, and two sisters had died of phthisis, but the lungs were healthy; the heart was very small. *May* 11*th*, 1853.

Specimens and Cases. By A. C. Post, M.D., Professor of Surgery in the University of New York.

Enchondroma.—Professor Post presented a specimen of enchondroma, removed from the palmar surface of the right thumb. The disease was of 25 years duration, and had been once removed, but had now returned. It consisted of two portions which were movable upon each other. The bone was originally firmly attached, but had been rendered movable by a blow from a stick of wood. The integuments were not adherent, and the operation required some nice dissection. The tumor was found adherent to the flexor tendons. He remarked that the disease had not been wholly extirpated in the first operation, and with all his care, some roughness still remained, which might serve as a nidus for a fresh growth.

Hysterical Paralysis.—Professor Post narrated the case of a lady, about 50 years of age, who was the subject of hysterical paralysis. She was affected with hysteria in her youth, and in some paroxysms gave evidence of extraordinary force. Lately, a little grandchild, having strayed away, one of these attacks came on, which, on its subsidence, has left her completely paralysed. She has no command of either extremity, but is able to move her head and neck. Sensibility remains perfect. She suffered much pain in the spine, which could be temporarily allayed by anodynes. *Sept.* 14*th*, 1853.

Tumor of the Lymphatic Glands of the Neck.—This tumor was removed from a boy 5 years of age, which involved the glands of the right side of the neck. It extended from the base of the jaw to the clavicle, and was situated below the sterno-cleido-mastoid muscle, and the deep facia, lying upon the internal jugular vein. During the operation the sheath of this vessel was laid bare for several inches, demanding a long and tedious dissection. The patient was kept under the influence of ether during the operation which lasted nearly two hours. He was much exhausted when he came out of the anæsthetic state; much of this was due to the unfavorable condition of the patient, who had eaten heartily before the operation. He vomited incessantly for 24 hours, when an enema was administered and he rallied. He has now a fair chance of recovery. Prof. P. regarded vomiting as an unfavorable symptom; the patient ate before the operation, contrary to his directions; he always instructs a patient to refrain from eating before the operation.

Mollities Ossium.—Prof. Post related the case of a man, 30 years of age, who, when a boy four to six years old, had necrosis of the thigh, followed by necrosis of one of the bones of the left arm, from which he recovered after a term of years. A few days since he was attacked with severe pain in the same arm, which swelled and became livid. He found him moribund, the arm being greatly swelled and painful; there was evident solution of continuity of the bone, and a false point of motion. On making an autopsy, the bone was found separated, but there were no marks of violence; it was simply an instance of mollities ossium, and turning in bed might have caused the lesion. *Sept. 28th*, 1853.

Specimens and Cases. By John O. Stone, M.D., Surgeon to Bellevue Hospital.

Rupture of the Heart.—Dr. Stone presented the heart, uterus, and right ovary of a woman, aged 53, who had died suddenly in Bellevue Hospital. He had not been able to obtain a complete history of the case, but mentioned that she had suffered severely from lancinating pains down the back, thighs, and right side. The right iliac fossa was the seat of a well marked tumor, while the left was fuller than natural; the right side was also exquisitely sensitive. There was also difficulty in urinating and a fetid sanious discharge from the vagina. She retired one evening in as comfortable a condition as usual, and was found dead in her bed, in the morning, having risen during the night. On examination, an abnormal opening was found existing in the right ventricle of the heart, and a large amount of fluid effused into the pericardium. The inability to urinate arose from the pressure upon the urethra of the distended uterus and the tumor which had been detected during life; this tumor was the transformed right ovary; a portion of it seeming to fluctuate was laid open and gave exit to a tea-cup full of grumous fluid and matter resembling encephaloid. The uterine walls contained cavities filled with grumous blood, and the os was the seat of cancerous degeneration.

Cancer of the Breast.—Mrs. J. T., aged 44, married, mother of two children, was admitted to Bellevue Hospital, August, 18th, 1853. About three years ago, a small tumor appeared in the left breast, which continued to increase in size until the 15th of April, 1852, when it was removed, having attained the size of a hen's egg. The parts healed by the first intention and the neighboring tissues, remained in a sound healthy condition until the first of June, 1853, when a small well defined tumor appeared in the same situation as before. This speedily took on inflammatory action, and ulcerated; a fungus shot up, and rapidly increased in size, assuming its present appearance in magnitude and shape. For the past few months it has been stationary, discharging a sanious fetid pus. On the evening of the 16th of October, 1853, the patient arose from her bed and seated herself upon the floor; her attention was soon after arrested by the appearance of blood flowing upon the floor. On placing her in bed and removing the dressings, it was found that a branch of the mammary artery had given away, and was the source of the hæmorrhage. The flow was arrested by pressure and the external use of tannic acid, and did not again recur. The patient was very weak, and the pulse at the wrist hardly perceptible; she however rallied during the night under the use of stimulants. Since that time she has remained in an exhausted condition, and has been sustained by internal stimulants. She died Oct. 25th.

On examination the tumor was found attached to the sternum, and through this to the lungs, so that they could not be separated without considerable force, and were therefore removed adherent. The pericardium contained about a pint of serum. The other organs, viz., the liver, stomach, uterus, and intestines were found in their normal condition, with the single exception of a small patch at the pyloric orifice of the stomach, about as large as a quarter of a dollar. The tumor was not particularly examined at the time. *Oct. 26th,* 1853.

Specimens and Cases. By W. Parker, M.D., Prof. of Surgery in the College of Physicians and Surgeons.

Tuberculous Kidney.—The person from whom this specimen was taken, died at Bellevue Hospital, on the 18th inst. He was 40 years of age, intemperate, of an originally good constitution; last autumn had an attack of epididymitis. In March last he came to the Hospital, suffering from gonorrhœa and inflamed testicle, of which he soon got better, and left. He soon after returned with febrile symptoms and well-marked epididymitis; he had no pain about the loins; there was some difficulty in passing water and considerable irritation and inflammation about the genital and urinary organs. This latter increased, suppuration ensued, and he finally sunk and died. Autopsy revealed this condition of the kidney with ulceration of the bladder, and some disease of the prostrate gland. On laying open the kidney it was found to be the seat of most extensive tuberculous deposit. The disorganization had proceeded to an extent rarely observed, and yet no symptom of the disease had attracted attention during life.

Cancerous Deposit around the Vena Cava Ascendens.—The man from whom this specimen was obtained was 28 years of age. Two years ago he had a fall which resulted in injury to his left testicle, which soon after began to enlarge, but without pain, and without any material effect upon his general health. In July, he sought advice, but the nature of the disease was obscure; the enlargement was attributed to a hydrocele and an exploratory puncture made which proved the diagnosis incorrect. The patient being dissatisfied, applied to irregular practitioners, who attributed the difficulty to bad treatment. He, however, obtained no benefit from their remedies, and the testicle was removed. He was afterwards able to walk about, but continued to emaciate and complain of neuralgic pains, for which strychnine and morphine were administered in large quantities. Dr. P. was called to see him six weeks ago, and found him in tetanic spasms from the medication. These symptoms subsided, and he lived until six days since. A tumor had been detected in the left iliac region, which from its rapid growth and the general symptoms, Dr. P. had diagnosticated to be cancerous. On making the autopsy all the organs were found healthy, but behind the left kidney, and pushing it forward and upward, was the enlarged and diseased vena cava. The tumor which embraced it was encephaloid, and attached rather firmly to the spine; it also entirely surrounded the emulgent vein and artery of the kidney. The kidney was healthy. The urine was examined during the last six weeks and found to deposit uric acid and urate of ammonia.

Cancerous Mammæ.—Prof. Parker exhibited two breasts, which he had recently removed. The first was from a lady, 27 years of age, unmarried, who, after exposure to cold, suffered from pain in her breast. This symptom subsided, but the organ continued to grow rapidly. Her general health remained good. The breast was removed, and on examination, under the microscope, the tumor was found to be cancerous.

The *second* specimen was taken from a married lady, the mother of six children, with no hereditary tendency to disease. Since the birth of her first child, sixteen years ago, this breast has troubled her, being hard, and preventing her nursing her other children; lately it has grown rapidly. In the belief that it was cancerous, he advised its removal, which was consented to, and the operation accordingly performed. It was the most bloody operation of the kind that he ever performed, it being necessary to secure sixteen arteries. The patient has since done well. Dr. Parker remarked at some length upon the uncertainty of the rules for the removal of these tumors. He believed that many of these chronically enlarged breasts, being in a state of indolent inflammatory action, served as a nidus for the development of true cancer at variable periods of their duration. He referred to a case where this state of things had lasted twenty years; some time since, he advised the patient to let it alone, but more recently noticed a change in the character of the tumor, which led him to advise its extirpation. After its removal, it was found to be unequivocally cancerous; there has been no unfavorable symptom follow the operation. He believed an hereditary tendency to cancer would have developed a further train of symptoms. He referred to the lip as a site where tumors of this kind were often situated.

ART. VII.—*A Case of Fourteen successive Miscarriages, terminating in Chorea and Death.* By F. M. GANETT, M.D., Pitt County, N. C.

MRS. B——, had enjoyed excellent health previous to her marriage, and during her first pregnancy, up to the fifth month, when she miscarried without any dangerous symptoms. She became pregnant a second time, and at fifth month miscarried again. In nine years from her marriage, she had fourteen miscarriages without ever having been delivered of a living child. The first six took place at the fifth month of her pregnancy, and in those that followed the intervals continued to diminish, the fourteenth being only three months. All the presentations were footling, but one, in which the vertex presented. About a week previously to the abortion in each case, the patient began to complain of bad feelings, pains in different portions of the system, languor, etc. Other than this her health was unimpaired. There was no uterine disease, that I could find out; there was no leucorrhœa, or discharge of any kind, and the menses returned regularly. Previously to her ninth abortion, no symptoms presented themselves differing from those of an ordinary labor. Chorea then developed itself so strongly marked, as to prevent locomotion to any extent. Her powers of conception remained unimpaired, and except the chorea which lasted until death; no other symptoms of disease presented themselves. The fœtuses from this time presented appearances of having been dead longer than those previously delivered, and the last one was putrid. Soon after the birth of the last fœtus, an attack of epilepsy occurred, and this came on at irregular intervals until her decease. For two weeks before the last confinement, she complained of severe pain in the head, which ceased entirely after the epileptic attack. Indeed, she remained in a state of stupor after the first attack. Her death took place three weeks after the last miscarriage. She complained previous to her death of pain in the epigastrium, and frequently scratched the part. A dark spot appeared at the seat of pain, but of what character I could not ascertain. The lochia never appeared after any of the abortions.

A number of deductions might be made, as regards the cause of the abortions. My own opinion is, that the cause lay in the nervous system. The subsequent attacks of chorea and epilepsy, seem to favor this view of the case.

Art. VIII.—*Malignant Pustule.* By E. D. Ayres, M.D., East Creek, N. Y. (Communicated in a letter to the Editors.)

The description of "*A peculiar form of Malignant Inflammation of the Lips and Face, resembling Malignant Pustule,*" by Prof. Parker, in the May number of your Journal, attracted my attention, from the close analogy borne by some of the cases therein described, to an affection which I have several times encountered within the last year. As the description given by Prof. Parker is so applicable to the disease as I have met it, the difference in the treatment, and the fatality of the disease, are the only objects of this communication.

The *first case* that I saw, occurred in the practice of a neighboring physician, and from its malignant type, alarmed his friends, and counsel was desired. I was sent for, and arrived in the evening of the 10th of September last. I found the patient, Mr. B——n, 31 years of age, a farmer, of temperate habits and good constitution, with the inferior lip greatly swollen, everted, and of a livid hue, the lividity extending to the mouth and fauces, and the tumefaction to the upper lip, and downwards to the pomum Adami. The tongue was moist; there was considerable dyspnœa, and difficulty of deglutition. The pulse was rapid, but small and fluttering; and the patient had been greatly alarmed, but on the subsidence of the pain had become composed. The attending physician was not present, but from the urgency of the case, I was induced to lay freely open the tumefied lip, and ordered yeast poultice to be applied. I followed this immediately with hot brandy toddy, which was directed to be continued with a powder of two grains of quinine, and four grains of carb. ammonia, given once every two hours, and calomel, two grains, every four hours. The affection had made its appearance in the form of a pustule, some three days previously, and, as in Prof. Parker's first case, was situated just below the vermilion border. It was attended with a burning, smarting sensation, which, as the livid, tumefied areola made its appearance, changed to a steady, intense pain. It was now a hard tumor, without pain, and almost insensible to the touch, resembling at once, erysipelas and carbuncle, and differing essentially from both. The treatment as above directed, was continued thirty-six hours, with decided benefit, the patient evidently gaining strength. There was now added a few grains of the pulv. Doveri to the calomel, as somewhat severe catharsis had supervened.

This treatment was continued twelve hours longer, when slight ptyalism being apparent, it was suspended, as also the brandy. Beef tea, nourishing broths, the quinine and ammonia, were administered for twenty-four hours longer, when the patient was considered beyond danger. He rapidly recovered on nourishing diet.

The *second case*, Mr. C——r, by occupation a carpenter, 35 years of age, temperate, had previously enjoyed good health, was attacked with symptoms similar to the first case. The dyspnœa and dysphagia were not so prominent, and the pustule had made its appearance below the angle of the mouth, on the right side. The tumefaction confined itself, principally, to that side of the face and throat. The period of incubation was longer, the pustule having made its appearance some five days before the occurrence of alarming symptoms. The pulse was 64 and small, and the tendency to death by asthenia, marked. This case was treated like the first, but rather more vigorously; he took three grains of quinine and six of carb. ammonia, every two hours, for the first twenty-four hours. The alarming symptoms subsided in 72 hours, and he resumed his labor in eight days from the time of the first attack of distressing symptoms, and has since remained in good health.

I have seen, during the past winter and spring, three other cases, exactly similar to the above, and have heard of several deaths occurring in the practice of neighboring physicians, from a disease bearing the same description, and doubtless, the same disease. But in no case can I learn that death followed the early and vigorous application of the tonic, stimulant, and it may be antiseptic plan.

PART SECOND.

CRITICAL ANALYSIS.

ART. IX.—*The Diseases of the Rectum.* By RICHARD QUAIN, F.R.S., Professor of Clinical Surgery in University College; Surgeon to University College Hospital. London, 1854. Crown 8vo., pp. 285, with 4 plates.

A Treatise on the Diseases, Injuries, and Malformations of the Rectum and Anus. By T. J. ASHTON, Surgeon to the Blenheim Dispensary, Fellow of the Royal Medical and Chirurgical Society of London, &c, &c. London, 1854. 8vo., pp. 356.

Observations on the Diseases of the Rectum. By T. B. CURLING, F.R.S., Surgeon to and Lecturer on Surgery at the London Hospital, &c., &c. London, 1851, 8vo., pp. 123.

On the Diseases of the Rectum. By JAMES SYME, F.R.S.E., Professor of Clinical Surgery in the University of Edinburgh, &c., &c. Edinburgh. 3d ed., 8vo., pp. 138.

MR. COPELAND published his *Observations on the Principal Diseases of the Rectum* in 1814; Mr. Calvert, *on Hemorrhoids, Strictures, and other Diseases of the Rectum*, in 1824; Mr. Howship, his *Practical Observations, &c., &c.*, on the most important *Diseases of the Lower Intestines and Anus*, in 1824; Mr. Salmon, *on Stricture of the Rectum*, in 1828; Mr. Herbert Mayo, his *Observations on the Injuries and Diseases of the Rectum*, in 1833; but it was reserved to Dr. Bushe, of New York, in 1837, the date of Mr. Syme's first edition, to furnish us with the most complete treatise before or since published on the *Malformations, Injuries, and Diseases of the Rectum and Anus.* The volumes at the head of our article, are the most recent productions of the British press, and the names of their authors, especially of Messrs. Quain, Syme and Curling, are quite familiar to the American Surgeon. The works of Messrs. Quain and

Ashton being of the most recent date, will principally engage our attention. Mr. Quain's treatise is founded on a series of Clinical Lectures, and he has retained the colloquial, or personal form, which the language in oral addresses naturally assumes. His arrangement is such that the histories of cases exhibiting the most important of the phases of each disease precede the general commentary upon it. He remarks:

> The object we have now in view being not the study of the natural history of disease, but the history of patients, their ailments, and their cure, the classification of the subjects of these lectures, beyond the grouping together those that present obvious affinities—is unimportant. I shall, therefore, proceed at once to the individual diseases, and first to one most frequently met with.

This disease is hemorrhoids, or piles. Although it seldom affects the young, it is remarkable, says Mr. Quain, that few persons attain to maturity without suffering from it more or less. Abdominal tumors, and pregnancy in the female, may give rise to the affection, but in far the greater number there is no appreciable internal organic change. An indolent life, a full diet, a torpid skin, and constipated bowels are sufficient to explain both congestions of the alimentary canal and of the head. A frequent resort to aperient medicines in time creates a habit, as difficult to be got rid of as any other habit. In practice, the plan of management, dietetic and medicinal, must be stated in detail.

> Remember, that as much of the illness which is suffered is induced by the common things with which we are all constantly surrounded and influenced, so the relief and prevention of the evil is, in a great measure, to be obtained by the direction and control of these. Common things must be carefully attended to by the practitioner; things that are not common will command attention.

Although not often observed till after the age of puberty, Mr. Ashton had under his care, at the Blenheim Dispensary, a child two years of age, suffering from external piles, (p. 101). As to the comparative frequency in the two sexes, Messrs. Syme and Curling agree with Dr. Bushe, that they are more common in males; the urinary and genital disorders of the latter, combined with freer habits of living, more than counterbalancing the influence of pregnancy in the female. Dr. Bushe supposed that sanguineous repletion in the female is sufficiently relieved by the menstrual function, and Mr. Ashton states that in the majority of the cases of hemorrhoids occurring in females that have come under his observation, the catamenia have either been suppressed, or the function more or less deranged, though in some cases, he admits, this may have been rather an effect than a cause. At the turn of life, observes Mr. Ashton, plethoric females are very liable to be subjects of hemorrhoids, and, in some instances, these discharges alternate with each other for some time before the uterine functions entirely subside.

In an interesting paper by Mr. Brown, on some diseases of the Rectum in women, *resulting fron certain conditions of the uterus*, (*Lond. Med. Times and Gazette*, March, 1854, pp. 232,) he remarks:

> All authors, however, notice that diseases of the rectum are more common in females than in males. I propose to inquire into the cause of this statistical fact, and shall endeavor to show that it is attributable to a uterine origin, and that the female rectum may suffer either from mechanical interference with its functions, from the pressure of an enlarged uterus, or from derangement of the circulation in that organ, inducing a corresponding disturbance in the circulation of the rectum.

He then proceeds to illustrate, by diagrams, how these abnormal conditions may give rise to hemorrhoids; but, after the opinions above quoted, of Dr. Bushe, Messrs. Curling, Syme, and Ashton, we confess that we are at a loss to know what value is to be attached to Mr. Brown's "statistical fact" as regards the comparative frequency of this affection in the two sexes.

A diversity of opinion prevails among surgical writers, as to the structure of hemorrhoids. To facilitate our comprehension of this matter, Mr. Quain enters into an examination of the natural disposition of the blood-vessels with which the rectum is so liberally supplied. His remarks are illustrated by plates showing how the arteries in the lower part of the bowel all join by transverse branches of good size, whilst the veins form loops, and freely communicate with each other. Mr. Curling likewise dwells upon the peculiar arrangement by which the veins form a plexus, for it is in these that the alteration constituting the hemorrhoidal tumor takes place. Mr. Quain observes:

> At an early stage, dilatation occurs, which in one part is gradual, fusiform, (*plate* 2); in another it is abrupt, starting suddenly out of the end of the loop into a rounded pouch. A degree of elongation of the looped part accompanies these changes, so that the vessel is lowered beyond its natural level (*plate* 2). During these alterations, the dilated vein still circulates fluid blood. In a more advanced stage the dilatations are still further enlarged, and they are found to contain clotted blood, or fibrinous matter. From the aggregation of veins thus dilated in different ways and in different degrees, loaded also with blood, or one of its elements, more or less solidified, the hemorrhoidal tumor is formed.

The anatominal structure of these tumors has a very important bearing on the therapeutical measures which may be adopted. The fact that we are dealing with veins, morbidly enlarged, may explain the occurrence of pyemia, which has proved fatal after the operations performed for their removal.

There can be no question that, in the language of Dionis, "*nous payons bien cher*" for the liberal supply of blood distributed to the rectum, and among the unpleasant consequences thus resulting, those produced by hæmorrhoids rank not the least. Judging from the remarks of the distinguished surgeon to whom we have above referred, a century since it was not "*dans le pouvoir de la Médecine et de la Chirurgie de les guerir radicalement*," (*Cours des Operations, etc.*, 1746, p. 401,) and in these tumors, palliative measures only were recommended. Indeed, with the views entertained by the ancients, it was considered hazardous to attempt a radical cure. But what are the opinions of modern surgeons, as to the propriety of effecting radical cures in cases complicated with other diseases? Let us hear Mr. Quain on the subject:

> From the oldest times, it has been a common belief, if not a medical dogma, that losses of blood, under the circumstances just indicated are salutary; that, at all events, they prevent matters from getting worse as regards the disorders we suppose to exist elsewhere, and ought not to be arrested. For all such impressions or traditions in the profession, there is, we are inclined to believe, some reasonable foundation; and yet we ought not, in a matter of such great importance, to be guided merely by impressions, however generally they may be entertained. I apprehend that the opinion entertained, respecting the healthful influence of fluxes of blood, arose, and continued to be strongly held, when the abstraction of blood was largely used as a remedy for actual disease. . . . . May it not be, then, that notions which have come down to us from a period when the large abstraction of blood was considered necessary, should require revision, when the opinion and practice in this respect have been much modified?

He then relates the case of a lady who, with bleeding hemorrhoids, had symptoms of pulmonary disease; yet, as she suffered so much from the pain and frequent recurrence of the bleeding, she submitted to their removal by an eminent surgeon in London. In three years from this period, this lady died of phthisis. At first view, this case may be regarded as settling the question as to the propriety of operating under similar circumstances, but we are disposed to coincide with the views of Mr. Quain, that merely with such a statement of facts we cannot draw any inference from the case.

> All the circumstances intermediate to the surgeon's operation, and the active development of phthisis, are wanting. Moreover, we do not know, from any well-observed examples, that the loss of blood will pre-

vent the active growth of tubercular disease, any more than it would cure it, or influence it beneficially in any stage of its progress.

On the other hand, is it not a fact incontestible, that whatever debilitates promotes the progress of tubercular disease? Have we not the testimony of Sir Benjamin Brodie, MM. Velpeau and Nelaton, that erroneous opinions have been entertained about the propriety of amputating in cases of arthritic disease, the supposed safety valve in tubercular disease of the lungs? Again, the practice of Dupuytren and Dr. Souberbielle, according to the "*Manière nouvelle de prat. l'Opération de la Pierre*," by Sanson and Begin, and the "*Traité de la Cystotomie*," by Belmas, furnishes us with abundant proof that the removal of the stone, even where there is every indication of tubercular disease of the lungs, "*peut arrêté les progrès de ces affections et guéri les malades.*"

True, Dr. Copland states that he has seen three cases in which fever, melancholia, and apoplexy have followed the arrest of the hemorrhoidal discharge, and Mr. Howship mentions the case of a gentleman subject to gout, who, soon after the arrest of the discharge by strong vitriolic lotions, died of gout in the stomach. A few years since, we removed hemorrhoidal tumors from a patient who some months previously had had an apoplectic attack, and this person died from cerebral disease in the course of a year after the operation. But although an habitual discharge may exert a salutary influence in moderating the flow of blood to the head, we doubt whether such can be the case in consumptive patients, when it is permitted to continue until it produces the waxy look, the bloodless lips, and defective energy, &c., &c., which is so often observed in such cases.

Mr. Syme, in referring to the popular prejudice which exists against interfering with bleeding piles, remarks that the worst consequences thus anticipated are hardly to be dreaded more than those directly sustained from the disease, "and the result of experience is quite opposed to the apprehension of harm being so produced." He relates a case illustrating the safety with which the hæmorrhage may be arrested, even when of the longest standing and greatest extent. In many of these cases, he observes, there is reason to fear that the cause has been mistaken for the effect.

Mr. Curling agrees with Herbert Mayo, that these discharges help to ward off attacks of gout, and prevent fits of apoplexy, for which reason he would avoid the sudden drying up of such discharges as have become natural to the system, and Mr. Ashton is of the opinion that, where there is a predisposition, hereditary or otherwise, to apoplexy, gout, phthisis, hemoptysis, epistaxis, or other kinds of hæmorrhage, local treatment must be a secondary consideration, and not adopted till the constitutional cause has been removed or palliated.

What is the best, the safest mode of effecting the radical cure of hemorrhoidal tumors? Cauterization, excision, and the ligature have had and still retain their advocates. Dionis, in 1746, recommended the use of the scissors, and Mr. Syme, in 1846, gives the preference to the same instrument in operating on external piles. But, although excision is the quickest and easiest mode of removing internal piles, he admits that it is "very apt to occasion a serious or even fatal hæmorrhage." Sufficient proof of this may be found in the *Leçons Orales*, &c., of Dupuytren, who extensively employed excision even in internal piles; and in the Lectures of Sir Astley Cooper. Mr. Syme very justly remarks, that if other practitioners had been equally candid with Sir Astley, we should, doubtless, have had more testimony as to the danger of this operation. On one occasion where he himself had cut away an internal hemorrhoid, it was necessary to employ manual pressure for several hours to restrain the bleeding. In the *London Med. Gazette*, vol. xv., p. 843, Sir Benjamin Brodie states that he nearly lost two patients under the same circumstances, and, like Sir Astley, he abandoned the practice.

Dr. Bushe came near losing two of his patients after the excision of internal hemorrhoids, and became so much alarmed that he did not again resort to it. Mr. Cline was accustomed to state in his lectures that he removed internal piles by excision, but that "a timid surgeon removes them by ligature." We have tried excision in one case, and, from the troublesome hæmorrhage which followed, we are satisfied to incur the imputation of timidity, which, according to Mr. Cline, applies to such men as the late Sir Astley Cooper, and Mr. Bushe, and to Sir Benjamin Brodie and Prof. Syme.

Is the ligature free from danger? The advocates of excision have attributed to this method, phlebitis, diffuse inflammation of the cellular tissue of the pelvis, peritonitis, tetanus, &c., &c. Mr. Curling states, that no fatal case of the kind has come under his notice, either in public or private practice. Mr. Quain has seen a single instance, and others have been observed by Mr. Copeland and Sir Benjamin Brodie. At a recent discussion of a paper by Mr. Henry Lee, "*On an improved plan of removing hæmorrhoidal tumors*," read before the Medical Society of London, Feb. 11th, 1854, Mr. Henry Smith mentioned a case which had come to his knowledge, in which the patient died of tetanus from the application of the ligature. We think it was some time during the year 1848, that Mr. Lee published a paper in the *London Medical Gazette*, in which he detailed cases where pus was distinctly traced in the course of the hemorrhoidal veins, and in which secondary abscesses proved fatal, from which Mr. Lee concluded, that it is not always safe to place a ligature upon the enlarged veins of the rectum, especially in the manner in which the operation is usually performed, viz., by passing a needle, armed with a ligature, through the base of the tumor, whereby it must occasionally happen that one of the larger veins of the rectum is transfixed, and its sides held apart by the ligatures tied on the opposite sides of the tumor. To obviate this danger, he proposed the application of the strongest nitric acid that can be procured, to destroy certain portions of the mucous membrane of the rectum, and to coagulate the blood in the veins of the part, so as to effectually seal the vessels against the entrance of any foreign matter. The use of nitric acid in the treatment of hemorrhoids, as is well known, was recommended by Mr. Houston, of Dublin, in his papers published in the Dublin Quarterly Journal of Medical Science, for March, 1843, and September, 1844. The particular form of the disease to which he considered this remedy applicable, was the florid vascular hemorrhoidal tumor. From the remarks of Mr. Lee at the meeting of the London Medical Society, to which we have above referred, it would seem that the nitric acid has been indiscriminately employed in Great Britain, and Mr. Ashton states that several instances have come under his observation, where mischief has arisen by attempting to destroy large growths with the acid; in three instances a communication had been formed between the rectum and vagina by its application in too large a quantity. The acid may be properly applied by means of a small piece of lint wound over the end of an eye-probe, but should not, according to Mr. Lee, be used in those eases where the mucous membrane has undergone an inflammatory thickening, or where, from long exposure, it has lost its villous character. At the above meeting, Messrs. Coulson, Hancock, Rowe, Harrison, Browne, and others who had been pupils of Mr. Copeland, expressed their preference for the ligature. Mr. Quain is disposed to regard the nitric acid with favor: "but, as I do not like changing from what I have long found an effective and safe plan of treatment (the ligature), I have not hitherto used the acid, or any similar application, for the cure of hemorrhoids."

In using ligatures, he would not apply them in large numbers, but would limit himself to two or three double ligatures, believing that it is better to have to return to the application of one or two more, than "to do too much even once in life." It is especially important to act upon this principle where the patient is in impaired health, or debilitated by loss of blood. Excision he regards as the proper operation in external hemorrhoids, though he has found a lotion of nitrate of silver, twenty grains to the ounce, very much abridge the duration of the attack.*

We cannot dwell on the remarks of our authors under the head of *abscess.* After alluding to the fetid odor belonging to the matter in rectal abscesses, where no communication exists between the intestine and the cavity of the abscess, he admits his inability to account for the fact, and observes that the whole subject stands in need of elucidation.

Having dwelt at such length upon the subject of hemorrhoids, we must be brief in our notice of rectal abscess and fistula in ano. The perusal of the case of "large abscess" near the rectum, detailed at pp. 84, 86, reminds us of that reported by Dr. Sayre in the March number of this Journal. Unlike the latter, however, the case terminated fatally. As to the propriety of operating for fistula in ano in phthisical patients, Mr. Quain thus remarks:

"It has long been a common belief in the profession, that there is a proneness to the formation of fistula among persons laboring under phthisis; but facts recorded by two most accurate observers, (MM. Andral and Louis,) lead irresistibly to the conclusion that this doctrine is erroneous." p. 116. Now at page 118, we find the following: "With respect to further examples of the presence of fistula in persons affected with phthisis, I need only state that in the abstracts of cases, which I have drawn from my hospital books, there is a good number respecting each of which it is narrated that, on account of the existence, more or less, of such symptoms as those detailed in the account of the last case, the operation was declined." This "good number" is, we think, a sufficient admission that the doctrine above alluded to is not, after all, so "erroneous," as the reader would infer from Mr. Quain's former remarks upon this point. Again: "Where the symptoms, then, of tubercular disease are present, the operation for fistula is not allowable. The wound does not heal; the sore is but enlarged, and the surface secreting pus augmented. In short, the operation fails, and, in failing, adds to the evil. I am not, however, disposed to look upon a former threatening of phthisis as always a bar to the operation, if the health at the time be robust. I have more than once acted upon this view, and have not found reason to regret having done so." p. 119. For some very interesting remarks under this head, we would refer the reader to Mr. Fergusson's Practical Surgery, 3d Lond. Ed., p. 749.

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* For some very interesting practical remarks, by Dr. John Watson, on the dangers incidental to operations on hemorrhoids, we would refer the reader to the number of this Journal, for July, 1844, p. 26.

Fistula will sometimes heal readily, even in patients affected with tubercular disease, and this, too, under medical treatment alone. Mr. Ashton speaks of a case of the kind, which was cured by washing the anus with soap and water, night and morning, and also after defecating, and not to allow the bowels to become constipated. p. 238. In this manner, the writer, "a *tuberculous subject*," has, for some three years, kept a fistula in such a condition as to give but very little annoyance. Prolapsus of the rectum, commonly called "prolapsus ani," is a very troublesome affection, especially among children, and, in ordinary cases, according to Mr. Quain, the constitutional state is at fault, "bread and butter" being the principal diet of the patients. Milk he regards as an essential element of the diet, and a little meat should be allowed. The child must be prevented from sitting beyond a very short time, when the evacuations are passed, and, if possible, the faeces should be passed while the child is lying on the back. If the bowel descend during the intervals of the evacuations, the child should be kept in bed, or on a couch. The grey-powder, with castor oil in small doses, combined with the compound cretaceous powder or mixture, and small quantities of opium, constitute the medical treatment pursued by Mr. Quain, and he asserts that he has known but a single instance in which this method has failed. An operation is seldom required in children, but, in the adult, the reverse is the rule. In females, of course, previous to resorting to any operation, inquiries should be carefully instituted to learn whether the prolapsus is owing to any abnormal condition or position of the uterus. The object of the operation is to bring about such a degree of the adhesive process as shall prevent the descent of the gut. The proceeding most generally adopted by Mr. Quain, consists in removing longitudinal folds of the skin, with a little encroachment on the mucous membrane, also, according to the method originally adopted by Dupuytren, and the principles laid down by Mr. Hey. The fold of integument is raised with a pair of forceps constructed for the purpose, and it is then snipped off with a pair of scissors bent on the side. But little dressing is necessary; lint dipped in water, put over the part, is all that is required at first. Afterwards, cleanliness, and an astringent lotion during the healing process. "Caution is required as to the extent of the integument removed; I allude to the breadth of this. In the natural state, the skin of the anus is in folds, which are necessary to allow the enlargement of the orifice during defecation. In this act, the sphincter muscle is dilated, the skin but unfolded. If, therefore, the latter (the skin) should be too freely removed, there is, afterwards, difficulty in voiding fecal matter when it is formed, or lumpy."

He remarks that he has met with no instance of a return of the prolapsus after this operation, though M. Velpeau has referred to such in his *Leçons orales de clinique chirurgicale*, tom. iii., p. 135. He has succeeded in curing prolapsus by applying ligatures to small pieces of the mucous membrane, as in tying hæmorrhoids. This was the favorite method with Mr. Copeland, and Mr. Ashton considers it the most simple and effectual, and at the same time attended with the least pain.

In cases when, from age, debility, or other circumstances, an operation cannot be performed, the intestine must be supported by pads and a T bandage, or by a truss, like that recommended by Gooch in his "*Cases and Practical Remarks on Surgery*," vol. ii., p. 158.

Upwards of 20 pages are devoted by Mr. Quain to ulcers of the skin and mucous membrane, under which head is included that painful affection known as fissure of the rectum. In the treatment of this, for many years, he was in the habit of resorting to Boyer's operation, viz., division of the sphincter ani; but in performing this on a certain occasion, the patient moved away, the bistoury having divided the mucous membrane and integument only. "It occurred to me at the moment, to ascertain if that slight incision would be enough to relieve the patient. The success was complete, and from that period I have used no other operation in ordinary circumstances." p. 165. In a note he remarks that he had supposed this method originated with himself, but he subsequently found, in a lecture by Sir Benjamin Brodie (*Lond. Med. Gazette*, vol. xvi., 1835), that he had been anticipated by this distinguished surgeon.

We pass over "Painful Contraction of the Sphincter Ani," in the existence of which, as an idiopathic affection, he does not believe; nor can we dwell on "Neuralgia of the Rectum," in which he has found the vapor of chloroform very beneficial.

Thirty-five pages are devoted to "Stricture of the Rectum," a disease of which, there can be no question, is often imaginary, but which may exist. Mr. Quain relates some very instructive cases under this head, showing what infamous quackery his patients have been subjected to by those who call themselves *surgeons!*

In the next place we find discussed "Concentric thickening and ulceration," "Tuberculated disease," and "Cancer of the rectum." Mr. Quain has detailed numerous cases illustrative of the symptoms and progress of the latter disease. As to the propriety of excision in this affection, he remarks that the evidence is to be drawn from foreign surgery; Lisfranc, boasting of curing in this manner six out of nine cases, whilst M. Velpeau is reported to have lost three out of six cases. (*Mem. de l'Acad. Roy. de Med.*, t. 3.) "My opinion is, that if the disease should be strictly limited to a small space in the lower end of the gut, the removal might be effected with a fair prospect of advantage, but that otherwise it is wholly inadmissible." p. 261.

Should complete obstruction occur, of course an artificial opening is the last resource, and, according to Mr. Quain, the left colon in the lumbar region is, "beyond all question," the part to be preferred for that purpose, as the opening may there be made without opening the peritoneum. Those desirous of becoming fully acquainted with the present state of our knowledge on this subject, cannot do better than to consult the valuable paper of Mr. Cæsar Hawkins, in the thirty-fifth volume of the Transactions of the Royal Medical and Chirurgical Society of London, or the elaborate work of Dr. Walshe.

The remaining portion of Mr. Quain's volume is occupied with the consideration of "Spasmodic Contraction of the bowels," "Polypus and Polypoid Growths," and "Foreign Bodies," in the rectum. In addition to these subjects, Mr. Ashton treats of "Malformations of the Rectum and Anus." He refers to a case in which the malformation was not discovered till twelve days after the child was born, in which the rectum was only reached by incisions made to a very great depth. During the past winter, the writer operated in a case in which the difficulty was not detected till 49 days after the child was born, and yet, by passing the knife to a very great depth, fecal matter was reached, and the intestines, for the first time, freely evacuated! At the time we supposed this case to be unparalleled, for we could find no record of an instance in which a child had lived for seven weeks without an evacuation, nor have we yet succeeded in finding the report of any case in which, after so long a period, an operation was successfully performed, But at a Meeting of the *Edinburgh Obstetrical Society*, May 12th. 1847, Dr. Lyell, of Dundee, communicated the particulars of a case in which a child lived upwards of 12 weeks, "*without any fæcal outlet but that of the mouth!*" (*Monthly Journal*, August, 1847, p. 137.) In January, 1854, Mr. Fergusson performed Amussat's operation of opening the descending colon in the left loin, in a case of imperforate anus. The infant was nine days old at the time, and, at the last reports, was doing well. A report of this case was presented to the *Pathological Society of London*, at its meeting on the 7th February, 1854, and, in the discussion to which it gave rise, Dr. Crisp and Mr. Adams expressed their preference of this method, to pushing a trocar into the rectum from the perineum, but Mr. Ashton remarks, p. 334, "I imagine few English surgeons would propose to adopt the operation of Littrè or Callisen for opening the descending colon, much less that of putting into practice that of Dubois, of opening the sigmoid flexure of the colon, and passing a strong probe through it towards the perineum, by pressure rendering the end prominent, if possible, then cutting down upon it."

Now, in a case like that observed by Dr. Lyell, in which the colon terminated in a *cul de sac*, floating loosely among the other intestines in the umbilical region, there is no alternative but to open the colon in the right groin, and not in the left, as was done by Mr. Fergusson.

But we must bring our remarks to a close. The works placed at the head of this article are all of a truly practical character. The treatise of Mr. Syme has passed into the third edition, although, like that of Mr. Curling, it is of moderate dimensions when compared with the more recent volumes of Messrs. Quain and Ashton. Mr. Curling is favorably known on this side of the Atlantic, by his excellent contributions on the subject of tetanus and the diseases of the testis, and the student may consult his work with the most implicit confidence in the merits of the author. The work by Mr. Ashton reminds us more of that on the same subject by Dr. Bushe than any that has since appeared. It is the most complete of all the works at present under consideration. Mr. Quain's volume is made up of *Clinical Lectures*, and is most richly illustrated with cases which have been under the care of its distinguished author. Coming from such a source, it cannot fail to receive the approbation of the profession, and its perusal must better qualify the practitioner to undertake the treatment of a class of cases which, when properly understood, may redound greatly to the surgeon's reputation, but which, if misunderstood and mismanaged, cannot fail to bring the latter into discredit, and to inflict unbounded tortures on their unhappy victims.

G. C. B.

Art. X. *An Inquiry into the Pathological Importance of Ulceration of the Os Uteri;* being the Croonian Lectures for the year 1854. By Charles West, M.D., Fellow of the Royal College of Physicians, Physician-Accoucheur to St. Bartholomew's Hospital, and Physician to the Hospital for Sick Children. London, 1854. (8vo. pp. 95.)

The fact that the *questio vexata* in uterine pathology was made the theme of the last course of the Croonian Lectures, before the Royal College of Physicians, affords evidence that, notwithstanding all that has of late been said and written upon this subject, the investigations and conclusions in this department of pathological study are as yet neither complete nor satisfactory. That the theme for these lectures was wisely selected as a highly important and practical topic, the learned physicians before whom they were delivered, and all who may peruse them, can bear testimony; for all who have noted the progress of this department of pathology, and have attentively studied the prolific issues from the press on this subject, in England and France, and especially those physicians who have made extended and careful investigations in reference to the nature and relations of uterine diseases, must have felt that there yet remains wide scope for original and highly important study connected with this subject, and that such investigations are urgently demanded.

In the investigation and discussion of the subject of the lectures now before us, the eminent physician-accoucheur of St. Bartholomew fully sustains and confirms his reputation as a faithful and philosophical observer, and a candid and scientific writer—a character so happily illustrated in his excellent treatise on the *Diseases of Children.* Happily conceiving the true method of studying the facts which concern uterine pathology, and omitting all controversy in reference to technicalities, Dr. West at once undertakes the examination of the facts bearing upon the important question that forms the subject of his lectures. He freely admits—and his own investigations even demonstrate, the frequent occurrence of those morbid conditions of the mucous covering of the os and cervix uteri, popularly denominated *ulceration*, but he is not prepared to admit, without better proof than has yet been offered, that this particular lesion is the widely-acting and determining cause of all the Protean forms of the diseases of females. By ingenious and varied arguments, he attempts to exhibit, in their true relation, the train of morbid processes in the more common uterine disorders, at the same time pointing out various errors into which he conceives that certain popular writers upon inflammation and ulceration of the cervix uteri have fallen.

In the commencement of his remarks upon the ordinary sources of disorder of the womb, Dr. West calls particular attention to the physiological phenomena attendant upon the performance of its highest function, that of reproduction; and he refers to the history of the fibro-cell development, or growth of the uterus during pregnancy, and the subsequent fatty degeneration of the same structure after delivery—the beautiful theory so satisfactorily demonstrated by the lamented Franz Kilian. In this connection, he remarks that,—

> In these changes, the body of the uterus, and the lining of its cavity, bear a far greater part than either the substance of its cervix, or the mucous membrane which line that canal. The mucous membrane of the body only is developed to the decidua, and it alone is thrown off after delivery; the lining membrane of the neck undergoes much slighter alterations, and is not deciduous. * * *
>
> At present, we are too imperfectly acquainted with the nature of those changes, which I have thus briefly sketched, to be able to say exactly what influence is produced by the accidents which interrupt the course of pregnancy, and originate the processes of degradation of the uterine tissue prematurely; or what results may follow from disease succeeding to delivery at the full period. We may confidently hope, in time, to know more; at present, we have learned from everyday experience that such occurrences interrupt the ready return of the womb to the size and condition which are natural to it in the unimpregnated state; that the organ is apt to remain permanently increased in size; that this enlargement is often more especially marked in the more lowly organized cervix; that, under such circumstances, the menstrual function is usually, in some respect or other, ill performed, while secretions are likely to be furnished from the organ, differing in quantity and quality from those which proceed from it in a state of health; that the performance of all the sexual functions is very apt to be attended by pain; that impregnation is less likely to occur; and that, if pregnancy should take place, there is very great probability of its coming to a premature termination.
>
> This set of symptoms, however, or, at least, many of them, are met with, independent of pregnancy and its consequences, supervening sometimes, indeed, under the influence of causes which evidently, and in a marked manner, interfere with the generative functions, but coming on at other times slowly, and, as far as we can discover, without cause. How are they to be explained? Do they proceed from an invariable pathological occurrence, which is present in every case, how wide soever may be, in other respects, the points of difference between them; or are they the indications of disordered functions, which may depend on causes as various as those which produce vomiting, or occasion dyspnœa? The inquiry is manifestly an important one; its elucidation will be the object of these lectures. It has been said that there is an invariable, or almost invariable, cause of these symp-

toms—that, be the remote occasion of them what it may, inflammation and ulceration of the neck of the womb is their immediate cause—that the key to the right understanding of uterine diseases is to be found in the correct appreciation of the importance of this condition, and the cardinal point in their treatment consists in the adoption of means for its cure.

After recapitulating the leading facts and inferences insisted on by Dr. Bennett and others, our author indulges in the following sarcastic, but, as we conceive, very just remarks:—

> As uterine pathology is simplified, beyond expectation, by the discovery of an almost invariable cause of the most diverse symptoms, so uterine therapeutics, also, are made easy, according to the writers whose opinions I am relating, by one remedy being found almost always applicable for the cure, be the duration or its severity what it may. * * * What caustics to use, how often to repeat their application, how to prevent or to remove those inconveniences which sometimes result from their employment, are questions discussed as of chief importance; since to these remedies all other local measures, as well as all general treatment, are but secondary and subservient.

Dr. West remarks that the evidence by which to try the accuracy of such statements is very various in its kind, and also of very various worth. This evidence he arranges under four principal heads:

1. A comparison of these statements with what is known concerning the anatomy and physiology of the uterus in a state of health.
2. The microscopic evidences of morbid anatomy.
3. The evidence afforded by the history of those cases in which ulceration of the cervix uteri occurs, unconnected with other disease.
4. The frequency of ulcerations of the os uteri under those circumstances in which they ordinarily come under our notice, and call, or are supposed to call, for our interference.

After considering the evidence under the first head, Dr. West offers the following remark:—

> If, structurally, so lowly organized—if, physiologically, of such secondary importance—if so much less subject than the body of the uterus to alterations in its intimate structure—and if so comparatively insensible even to rude modes of therapeutical interference—it certainly does appear to me that the assumption, that some slight abrasion of the mucous membrane covering this part is capable of causing a list of ills, so formidable as are attributed to it, ought to rest for its support upon some other and stronger foundation than any inference fairly deducible from anatomical or physiological data.

In seeking evidence under the second head, Dr. West has studiously avoided the errors and defects marking the statements and conclusions of such observers as M. Pichard, Dr. Ashwell, and M. Lair, the negative and indefinite results of whose necroscopic investigations on this subject, are manifestly defective and valueless. The question which Dr. West seeks to decide, is, "With what frequency, and associated with what other changes, do we meet with indications of inflammation and ulceration of the os and cervix uteri, in the bodies of women after puberty, and especially during the period of sexual activity?"

Dr. West's observations, amounting to only sixty-two cases, were made on patients who died in the medical wards of St. Bartholomew's Hospital, of some other than uterine disease. Of these sixty-two cases, thirty-three uteri were found healthy, and twenty-nine diseased; ulceration of the os uteri existed in seventeen cases; existed alone in eleven; with diseased lining of the uterus, in three; and with induration of the walls of the uterus, in three instances. In five cases, there was found induration of the wall of the uterus, without ulceration of the os; and in seven cases, there was disease of the lining of the uterus, without any disease of the os.

After giving a very extended and minute history of the morbid appearances of the uteri in these twenty-nine cases, Dr. West remarks that—

> Other evidence, indeed, must be adduced than that which analogical reasoning from the facts of physiology has suggested, or than that which examinations after death have furnished, before we shall be entitled to reject the opinion that inflammation of the cervix, and ulceraion of the os uteri, are occurrences of very serious pathological importance, the occasion of nearly all the ills which affect the physical wellbeing of women. * * * Tempting though this hypothesis may be, and numerous the difficulties which it may appear to solve, we yet have found that it is opposed by the facts of physiology, and unsupported, to say the least, by the results of anatomical investigation.

As regards the evidence referred to under the third head, Dr. West considers, that "in almost every woman, whose uterus becomes prolapsed beyond the external parts, we may observe the effects which ulceration of the os uteri commonly produces, the symptoms to which it generally gives rise, etc."

It is from this class of cases that he adduces all his evidence of the negative and unimportant consequences of ulceration of the cervix uteri alone considered. But the conclusion expressed above, though apparently legitimate enough, is by no means necessarily correct; for it is sufficiently manifest, that whatever may be the extent of the irritation incident to the ordinary lesions and morbid conditions of the os uteri, and how important soever the sympathies thereby excited, the occurrence of the important organic displacement referred to is an event sufficiently grave, and perfectly adapted to absorb or obscure all other morbid symptoms and sympathies incident to the lesions in question. It has fallen to our lot to have seen a large number of the unfortunate class of patients here referred to, and we have uniformly observed that the sufferings and the symptoms resulting from the displacement, have obscured all the ordinary symptoms incident to a morbid condition of the cervix uteri, however extensive the ulceration, congestion, or induration of this part. Further, we conceive that there is very little similarity between the ulceration occurring in the procedent uterus, and those morbid conditions usually seen in the cervix uteri *in situ*.

Under the fourth head, Dr. West enters upon a very extended and carefully digested series of investigations of what clinical observation generally teaches concerning ulceration of the os uteri—its course, symptoms, and importance. This series of investigations are included in twelve distinct divisions.

1. An examination of the question of the alleged peculiar susceptibility of the cervix and os uteri, and their readiness to take on ulcerative disease, etc. This investigation is based upon the history of forty cases in the venereal wards of St. Bartholomew's, in twenty-seven of which cases, Dr. West states that he found the os and cervix uteri absolutely healthy.

2. An investigation to determine the effect of the ulceration of the os uteri upon the fecundity of the female, based upon the history of 1960 married women, 980 of whom were healthy, and 980 of whom were suffering from uterine disease—117 of this number being cases of ulceration.

3. The period of life at which ulceration of the os uteri occurs most frequently.

4. Alleged causes of uterine ailment, and the ratio of ulceration in the same.

5. Duration of symptoms at commencement of treatment. (Showing that patients suffering from ulceration, do not apply for treatment at an earlier period, after attention is called to the uterine symptoms, than do those affected by uterine affections, without ulceration.)

6. A table showing the state of menstruation in cases of uterine disease, with and without ulceration of the os.

7. An examination of 258 cases of uterine disorder, in 240 of which there was leucorrhœa, to show the relation of that symptom to ulceration of the os uteri.

8. A table showing the seat of pain in the two classes of cases of uterine disease.

9. An examination with reference to the state of the uterus in the two classes of cases.

10. A table showing the different seats, and comparative frequency of different forms of ulceration of the os uteri, in 121 cases.

11. A table showing the degree in which the different forms of ulceration existed.

12. An examination of 16 cases, in which there existed extensive ulceration of the orifice of the womb, showing the various conditions of the uterus associated therewith.

The following are the most important conclusions to which Dr. West arrives, as the result of his statistical investigations:

1. Uterine pain, menstrual disorder, and leucorrhœal discharges—the symptoms ordinarily attributed to ulceration of the os uteri—are met with independently of that condition, almost as often as in connection with it.

2. These symptoms are observed in both classes of cases, with a vastly preponderating frequency at the time of the greatest vigor of the sexual functions, and no cause has so great a share in their production as the different incidents connected with the active exercise of the unproductive powers. But it does not appear that ulceration of the os uteri exerts any special influence either in causing sterility or inducing abortion.

Similar conclusions follow, also, concerning induration, and hypertrophy of the cervix uteri.

Thus it is seen that conclusions widely different from those given by Dr. Bennett, Mr. Whitehead, and others, are arrived at by Dr. West, by pushing investigations in a different direction from those popularly pursued, in reference to the questions at issue in uterine pathology. But legitimate and satisfactory as these conclusions of Dr. West appear, from the statistical data he has given, we do not conceive that these deductions can be considered as established facts in uterine pathology, any more than are some of the more crude deductions of certain pathologists, whose theories his figures seem to demolish. Every one who reads Dr. West's writings must be satisfied, however, that as an accurate observer and a truthful writer, he is perfectly reliable. The candor and the earnestness of his investigations, and also his mode of analysis and study of facts, are models for the pathological student. It is a sufficient criticism upon Dr. West's conclusions, as indicated above, to say that it is certain that some of them would be essentially modified if he should pursue a series of as rigid investigations in reference to the following questions:

1st. In the treatment of cases of uterine disorder, attended with lesions of the os and cervix uteri, what amount and kind of benefit is derived from attending to the special lesion in question?

2nd. What number of such cases prove utterly incurable, until special curative treatment is directed to the diseased cervix, and what proportion of the cases so treated do speedily recover?

3rd. What is the number and the character of those cases of abortion that are associated with disease of the cervix uteri, as the only discoverable disease of the generative organs, and in what proportion of such cases is recovery from the local disease followed by successful pregnancy?

In his closing lecture, Dr. West enters upon investigations of the greatest practical importance, concerning the various causes of the more common uterine ailments, and the constitutional and functional relations of such affections, the latter of which he considers of far greater practical importance than the former. In a large proportion of such cases, he finds, as the primary and principal derangement of health, a morbid state of the circulating fluids, dyspepsia, imperfect depuration of the blood, a rheumatic or other unhealthy diathesis, etc.; and lastly as a matter of prominent importance, he mentions the subject of morbid deficiency and morbid excess in the involution of the uterus, after delivery, as proposed by Prof. Simpson, in the *Edinburgh Monthly Journal*, for 1852. To inflammation and disease of the body of the uterus, and of the lining membrane of its cavity, Dr. West attributes far greater importance than to any abnormities affecting the cervix and os. In reference to granular inflammation of the os, and certain forms of ulceration, Dr. West makes some important suggestions. He justly remarks, that, with reference to the morbid state of the os uteri, there is much need of careful microscopic research.

On the subject of the popular therapeutical management of uterine disorders, Dr. West offers some searching and practically important criticisms which every physician should heed. So far as the use of the most potent caustics is concerned, he boldly avows their inutility, and even concerning the ordinary applications of nitrate of silver, etc., to the cervix uteri, he would dissent from the views popularly entertained. In his opinion, the treatment proposed by Dr. Bennett comes far short of that essential meed of merit, *tuto, cito, et jucunde.*

The questions proposed by Dr. West, and the discussion upon which he has entered in these lectures, are of the highest practical importance and interest, and they also possess the peculiar merit of originality and fairness, contrasting strikingly with certain crude and dogmatic attempts at similar efforts, put forth by Dr. Robert Lee, and others.

We are happy to learn that these lectures are soon to be republished in this country, and this fact renders unnecessary any further notice of the work in this place. We feel assured that its intrinsic merits, and the peculiar excellencies of the author's style, will secure for it a more extensive reading than any similar treatise has enjoyed. All who peruse it must feel that its talented author has done a good work for the profession; yet it requires no spirit of prophecy to foresee that many a lance will yet be broken by the gallant knights of science, ere the great questions at issue between uterine pathologists, will be finally settled. E. H.

ART. XI.—*Epilepsy and Allied Affections.* By CHARLES BLAND RADCLIFFE, M.D., Assistant Physician to the Westminster Hospital. London: 1854.

THERE can be no more convincing proof that the web, which Aristotle threw around science, has been thoroughly broken and destroyed, than the publication of such works as the one whose title heads this article. Perhaps it is a fault of Mr. Radcliffe, as it is of many others, that he is too fond of erecting new theories, and discarding those sanctioned by time, but the philosophical and candid, as well as the able manner in which he thinks and writes, renders his pen attractive, whether or not we yield assent to his views. Certainly the doctrine of muscular contraction, which he attempts to overthrow, has been considered one of the best established in physiology.

It is held by Mr. R., that muscles, instead of contracting by the stimulation of vital and physical agents, contract only when this is suspended or diminished. Hence such facts as the following: the involuntary muscles, receiving in a less degree the stimulus of nerves and blood, contract more frequently and strongly than the voluntary; the rigor mortis occurs soonest after death in those who have been exhausted by old age or by chronic disorder; the sedative, cold, causes contractions, in other words, the absence of the stimulus, heat; when a muscle is at rest, the galvanometer indicates electric currents passing between its ends and sides; not from end to end, or side to side; during contraction, there are no currents whatever. (M. Dubois Reymond.) In other words, contraction occurs when electrical action is suspended. So a muscle in a state of permanent contraction, as from strychnia, or in tetanus, has no electric currents. (Reymond.)

If a temporary abeyance of vital electricity causes muscular contraction, why do currents of artificial electricity induce it? Mr. Radcliffe speaks thus on this point:—

Take a simple galvanic cell, and the skinned hind leg of a frog, and apply one pole to the end of the thigh, and the other to the foot. If the poles be so arranged that the current is from the foot to the thigh, a slight contraction happens on closing the circuit, and a violent one on breaking it; if, on the other hand, the poles are reversed, and the current be made to pass from the thigh to the foot, there is a violent contraction on closing the circuit, and a slight one on breaking it. The slight contractions only continue for a short time, but the violent contractions remain until the muscular irritability is exhausted.

Now in analysing this experiment, it must be remembered, that there is a natural current from the foot to the thigh, and remembering this, the explanation is not difficult. What then is the influence of the artificial current in relation to the violent contractions? When the natural and artificial currents pass in the same direction, each current must intensify the other, and yet the contraction does not happen until the artificial current is suspended. When, on the other hand, the natural and artificial currents pass in opposite directions, and the one must neutralize the other, the contraction happens during the time of neutralization. It is coincident with the negation of electrical action.

Chemical agents cannot be said to excite contractions. "On the other hand, chloroform, ether, alcohol, and some other agents, which are manifestly stimulant, cause decided relaxation in the muscular system, when they are introduced into the circulation."

Our limits forbid a farther examination of this new physiological doctrine, which is certainly ably and plausibly presented, and our readers must judge of its correctness for themselves. Its significance in a treatise on epilepsy and allied affections, is apparent. As in a physiological, so in a pathological condition, muscular contractions are due, Mr. Radcliffe thinks, to a lack, in one way or another, of the usual stimulation. Epilepsy, chorea, delirium tremens, mercurial poisoning, cholera, tetanus, ergotism, etc., are considered by him diseases of debility. Convulsions, under all the circumstances of their occurrence, are accompanied by the weak pulse, pallid surface, and other symptoms of debility, and when depleting measures are serviceable, they are so by relieving organs overpowered by congestion, or by deleterious substances.

The following quotations will show Mr. Radcliffe's treatment of epilepsy.

Good substantial food, of which a large portion is beef or mutton, is given to epileptics in many lunatic asylums, and with unquestionable benefit. For my own part, I am in the habit of recommending a very liberal allowance of stimulants, and I am fully satisfied, from the results of this practice, that there is no disease in which they are more needed than in epilepsy. I have notes of cases in which recovery was delayed until the patient had been persuaded to take wine. More than once, a patient has told me, that he has succeeded in warding off a fit by a glass of wine, or by a draught of ale.

It is in keeping with these considerations, that epileptics are benefited by coffee, which is a powerful stimulant, and not by tea, which is a sedative.

Arguing from the great readiness with which the muscles are fatigued, and the very marked slowness of the reparative process after fatigue, the natural conclusion appears to be, that they ought to be rested rather than exercised; and experience confirms this conclusion.

After speaking of the administration of tonics, which he recommends, especially quinine and iron, and of turpentine and naptha, which, though beneficial to the epileptic, are disagreeable and nauseating, he proceeds:—

After this it occurred to me to try camphor, and this I did, in doses of two or three grains, either alone or in combination with quinine or iron, one or both, according to circumstances. Being given in the form of pills, it was free from the principal objection applying to the two former stimulants, and it had this peculiar advantage, that instead of irritating the urinary and generative organs, like turpentine, it exercised, or seemed to exercise a direct quieting influence upon them. In other respects, as tried in several cases, the result was not less satisfactory.

Next in order I gave a fair trial to chloric ether, and still with very decided benefit. Under ordinary circumstances I gave half-drachm doses of this preparation, either alone or in combination with the ammonio-citrate of iron, or quinine, or naptha, and in all cases, it proved to be a very favorite and effectual remedy, particularly with children. Sometimes I substituted Hoffman's anodyne in place of the chloric ether; and sometimes, when the need of a stimulant has seemed to be very urgent, I have associated the two; but it has always seemed that this form of ether is far less pleasant, and efficacious, than chloric ether.

In cases where, and at times when, an occasional stimulant effort was necessary, I have recommended the aromatic spirit of ammonia, either alone or in combination with ether, and the result has really been certain and satisfactory.

Mr. Radcliffe also recommends counter-irritants, and the hot bath as external stimulants.

The following extracts on the treatment of affections allied to epilepsy deserve attention.

In tremulous disorders abstinence forms no part of the treatment. A person who trembles habitually, whether young or old, trembles more before a good meal than after it. In chorea it is still the same.

The obstinacy of the laryngeal spasm in hooping cough is in direct relation to the debility of the patient. The corpse-like appearance of catalepsy is wholly inconsistent with the idea, that gluttony had been a cause of the disorder. Tetanus, likewise, in spite of all prejudices to the contrary is now admitted to require the most assiduous administration of nutriment.

Tonics do not appear to be necessary, except now and then, in such chronic cases as chorea, hysteria, or catalepsy, or in such states of convalescence as follow after tetanus. In these cases, and under these circumstances, quinine and iron will probably be found to be the most valuable of this class of remedies. Stimulants, on the other hand, appear to be as indispensible as they are in epilepsy.

In ordinary tremulousness, sal volatile and ether are admitted remedies, and so are they in delirium tremens, in subsultas, and in mercurial trembling. In chorea I am in the constant habit of giving large doses of chloric ether, in conjunction with the ammonio-citrate of iron, and I can speak very positively as to the benefit resulting from this practice. I have not had the opportunity of carrying out these principles in hydrophobia; but if I had, I would do so without any hesitation. I would give frequent draughts of ether, and hot brandy and water, along with turpentine injections; and if the act of swallowing was very distressing, I would multiply the injections, and administer the ether and brandy in this manner.

In the spasmodic stage of hooping-cough, I can testify as to the great benefit resulting from large doses of chloric ether, along with steel or camphor mixture, according as the patient was anæmiate or not.

Mr. Radcliffe believes that chloroform suspends convulsions by its stimulating effect.

From the foregoing extracts the reader will learn the peculiar views of Mr Radcliffe, and the facts upon which they are based. The point of greatest interest is in reference to their influence upon the treatment of convulsive affections, and in this respect it will be perceived that he advances nothing new, but rather confirms the resort to, and perseverance in, the use of old remedies. The work is rather suggestive than practical, and will tend to awaken a new interest in the pathology of these obscure diseases, which must result in important discoveries.

ART. XII.—*Clinical Lectures on Pulmonary Consumption.* By THEOPHILUS THOMPSON, M.D., F.R.S., Physician to the Hospital for Consumption, and Diseases of the Chest. London. Philadelphia: Lindsay & Blakiston, 1854.

PULMONARY consumption is a disease so common, and one that has been so much studied, that it might be doubted whether any thing new can be offered on the subject. But if we mistake not, this treatise contains important practical matter, with which the mass of physicians are still unacquainted. The work comes to us strongly recommended, from the favorable position of the author for studying this disease, as physician to a large hospital devoted exclusively to consumption.' It contains the results of his observations and investigations of the most important and practical subjects connected with phthisis, with the statistics on which his conclusions are based. We shall merely present some of the more important facts brought to light by his labors, leaving it to the reader to receive the full benefit of the volume by its perusal. In speaking of the symptoms of consumption, the author makes the following interesting remarks on hæmoptysis:

> The ordinary cause of hæmoptysis is doubtless, compression or obliteration of the pulmonary veins by the tubercular deposits, in consequence of which, blood interrupted in its natural channels, overflows or exudes into the neighboring bronchi. If this explanation be correct, hæmoptysis, moderate in amount, must be regarded rather as beneficial than alarming. By preventing the stagnation of unhealthy blood, it must tend to oppose the extension of tubercular disease, and as far as a conclusion may be drawn from the cases under my care, the influence of hæmoptysis of considerable amount would seem to have been rather favorable than otherwise. You will observe that some of the cases of phthisis recorded in the table, accompanied with copious hæmoptysis, were remarkably slow in their progress. In six of the cases, the quantity of blood expectorated at once has exceeded a pint, and the time which has elapsed since the occurrence of the profuse hæmoptysis to the present period, has been in these patients respectively, six months, twenty-two months, twelve months, ten months, eight months, and five years. * * * * It is better to moderate this symptom, by producing determination to other organs, than to employ direct astringents. You will find great benefit in many cases from the administration of a dose of calomel or mercurial pill, with henbane, followed by the use of half-drachm doses of sulphate of magnesia, with diluted sulphuric acid, administered twice a day.

The expectoration in consumption, Dr. Thompson divides into four kinds, corresponding with the stages of the disease; first, the salivary, or frothy; secondly, the mucus; thirdly, the flocculent; fourthly, the purulent, or porraceous. He believes that the proportion of salts in the sputum is in "an inverse ratio to the degree of inflammation present." "As an approximation to the proportion of saline matter in the solids expectorated, we may mention from twenty to thirty per cent in catarrh, from fifteen to twenty in the more opaque mucus of chronic bronchitis, and rather less than ten in the puriform expectoration of advanced phthisis."

The author speaks of a microscopic plant, resembling the torula of the yeast, which he found in the sputum of a boy, and which he thinks came from a cavity under the right clavicle. This cryptogamic growth from the lungs, appeared identical with that discovered by Dr. Hughes

Bennett, and described by him in the *Transactions of the Royal Society* of Edinburgh, for 1841.

The pulse of the consumptive, Dr. T. regards of considerable diagnostic value. That of a healthy adult has been shown by statistics, collected by Dr. Guy, to vary in frequency according as the individual is sitting or standing; pulses of 60, 80, 100 and 120 in the sitting posture, rising respectively to 66, 93, 119, and 147 when standing. In the phthisical he remarks:

> The difference produced by change of posture is comparatively trivial. * * * In cases of debility, change of posture produces so much more effect on the pulse than in the healthy state, that Dr. Knox regarded this indication as a sort of asthenometer. The importance of this fact, in connection with our present subject, is obvious; since the debility associated with phthisis might be expected to counteract rather than to produce the inaptitude of the pulse to be modified by change of posture. If you compare the pulse of a consumptive patient on different days, you will often find that its variations in frequency are more considerable than can be readily explained; but on the days when the pulse is the least frequent, you will usually find the difference produced by change of posture to be greatest.

The author believes, that, as phthisis advances, the amount of solid constituents in the urine undergoes a change; the uric acid increasing, and the urea diminishing. His explanation of this is, that defective aeration of the blood prevents the conversion of uric acid into urea, and he has noticed, that during the administration of cod liver oil, the proportion of these elements became more natural.

In the following extracts, we learn the author's appreciation of prolonged expiration, as a sign of tuberculous deposit in the lungs:

> During the time of my attendance on the out-patients of this institution, I made this symptom, prolonged expiratory murmur, an object of particular notice, and among 2000 consumptive patients, it proved to be the most remarkable of the physical signs, in 288; those cases presenting bronchial complications being excluded. Hæmoptysis had occurred in 91 of these cases, that is in 31 per cent., a proportion calculated to confirm my opinion of the significancy of the prolonged murmurs, and at the same time sufficiently below the average frequency of hæmoptysis in the first stage of phthisis, to support the assumption that the prolonged expiratory murmur takes precedence of other characteristic signs, which are commonly assumed as requisite, in order to prove the existence of consumptive disease.
>
> With a view to the correct appreciation of the sign under our consideration, keep in mind the situation, degree, persistency, and simplicity in which it is presented. Prolonged expiratory murmur, slight in degree, if heard only on the right side is inconclusive, but if confined to the left, is far more significant. The more limited the space over which it is heard, the greater the probability that phthisis is the

cause. The persistency of the sign, for a considerable period, if unattended with symptoms of bronchitis, emphysema, or pneumonia, indicates some permanent obstacle to the free exit of the air, and, in a majority of instances, this obstruction is of a tuberculous nature. In cases depending on pulmonary congestion, the expiration, after cupping and other appropriate treatment, usually resumes its natural character; but excluding this, and other complications, before noticed. I have not recorded any instance, in which this sign, once fully established, ever ceased to be obvious, unless superseded by other signs.

Although in many instances, no specific complaint was made by the patients, except of debility, and although, in this respect, improvement occurred under suitable treatment, it was yet common for the murmur to increase in duration, and deviate more and more from its natural character, whilst sooner or later, dull percussion, bronchophony, hurried breathing, quick pulse, emaciation, and night perspirations, too often occurring in succession, afforded affecting testimony to the correctness of the first diagnosis.

Fistula in ano, according to Dr. Thompson's statistics, has a decided retarding effect in the course of phthisis, and should be considered a salutary complication. He says:—

> Among the causes tending to retard the progress of pulmonary consumption, I am disposed to mention fistula in ano. A few years since there happened at one time to be under my care nine consumptive patients, affected with this disease. I had the curiosity to inquire into the duration of the malady in each case, and found, on adding the periods together, and dividing by the number of patients, that I obtained an average of two years and nine months, although the disease had not in any instance, advanced beyond the first stage. When you reflect that the duration of phthisis in a majority of cases, does not exceed eighteen months, you will concur with me in the impression, that fistula may possibly, in the way of derivation or counter irritation, retard the progress of the malady. Practically, this subject claims particular attention. When the surgeon operates on fistula in the phthisical, the wound is inapt to heal; but, were it otherwise, the operation would be a measure of questionable propriety, if the disease tends directly or indirectly to abate consumption.

After describing the diarrhœa attending phthisis, and objecting to the more powerful astringents, as likely to produce the opposite condition of the bowels, Dr. T. observes:—

> On the whole, there is no remedy for this affection, which has acted so satisfactorily under my observation, as the trisnitrate of bismuth, which I commonly administer at intervals of four or six hours, in doses of five grains, combined with three grains of gum arabic, and two of magnesia. A larger dose may be given with safety, but that specified, has appeared to me the most appropriate for the purpose. It is probable that in many cases phthisical diarrhœa depends more on the condition of the vessels in the neighborhood than on the ulcers themselves, and the bismuth probably exerts a tonic influence on these

vessels, as well as on any ulcerations. This opinion is not altogether speculative, since I have had opportunities of observing the power of this remedy, when scattered over the languid granulations of cutaneous ulcers, in restoring them to a firm and healthy character. The bismuth is not so prompt in its effects as acetate of lead, and therefore requires to be used with perseverance, but when care has been used to correct collateral derangements, I rarely fail in two or three days to observe amelioration of the symptoms, with this advantage—that the good effect is permanent, and without incidental disadvantages. Indeed it usually gives a better tone to the digestive organs generally, and corrects the sinking feelings about the epigastrium, with which the consumptive patient is occasionally distressed.

The following remarks relate to what the author terms wavy inspiration:—

The inspiratory sound instead of being equally sustained from its commencement to its termination, is divided into several parts. Sometimes it is more feeble than natural; at other times rather harsh, but not necessarily altered in character.

An examination of my notes, recording the history of about a hundred patients, in whom wavy inspiration was a principal symptom, has convinced me that there are certain varieties of this kind of inspiration, with which it is important to be familiar. One of these varieties probably depends on obstruction to respiration, produced by pleuritic adhesion. This variety of the sign occurs in nearly equal proportion on the right and the left side; it is, I think, increased by pressing the stethoscope firmly over the part: it is often attended with pleuritic friction sound, and is usually very distinct.

Another variety is apparently associated with rheumatic conditions. The wavy inspiration thus produced is usually high in tone, often rather widely diffused, and variable in situation, and usually accompanied by pain in the part. In confirmation of the opinion just expressed, it may be incidentally mentioned, that small doses of colchicum are useful in the treatment of this affection, and that the use of lemon-juice is likewise advantageous. This latter remedy has also appeared to me of service in some instances of intercurrent pleurisy in the consumptive.

A third variety occasionally accompanies bronchial affections, and under such circumstances the cause may be detected by the coexistence of ronchi and other symptoms characteristic of bronchitis. Interrupted inspiration, however, according to my observation, in a great majority of instances, has no necessary relation to either of these conditions. The sign, in a very large proportion of cases, is limited to the left side, (contrasting remarkably in this respect with prolonged expiratory murmur,) and this fact is inconsistent with the idea of its necessary dependence either on pleurisy or phthisis. The usual situation of the sound is near the apex of the lungs in front, but occasionally I have observed it at the posterior part of the chest, where, indeed, it may occasionally be present without attracting notice. * * * I was once accustomed to regard the sign which I have now brought under your observation, as a proof that phthisis had actually commenced, but more extended opportunities of watching patients, in whom it has continued for many years, without becoming complicated with any other indication of disease, have induced me to modify that opinion. It is true that I have certainly often observed wavy inspiration at one part of the chest when pectoriloquy or cavernous respiration could be elsewhere detected, or when other indications, local or general, of advanced consumption have been present, and in a greater number of instances, the wavy inspiration has been superseded by the occurrence of bronchial respiration, dullness on percussion, dry crepitation (crackling) or other more or less decided evidences of the establishment of phthisis; but in a still greater proportion of cases it has continued for a considerable period, to be the only important evidence of deviation from the natural state. Often, indeed, I have watched the symptom for years, without observing any transition to serious disease. Of 105 cases, carefully recorded in the course of an investigation which I formerly made, regarding this symptom, 32 afforded grounds for suspecting tubercular disease; such, for example, as dullness on percussion, or prolonged expiratory murmurs; in 22, hæmoptysis had occurred; in 3 a murmur could be heard over the pulmonary artery. But of the remainder, many were not affected even with a cough, and their complaints were usually expressed in general terms, as of "delicate health," "easy fatigue;" or if they made any reference to the chest, it was seldom of any thing beyond slight oppression of respiration, or of "seeming to breathe through thin cambric." It is, therefore, reasonable to conclude, that, if this form of interrupted inspiration be an indication of tubercular disease, it is the earliest local sign with which we are acquainted. The question, however, naturally occurs, can this symptom depend on mere functional disturbance, and disappear, leaving the subject of it in apparent health?

Having devoted some attention to this inquiry, I must acknowledge that although wavy inspiration, when dependent on pleurisy, bronchial affection, or rheumatism, may disappear, I have not satisfied myself of its removal, (unless superseded by more serious symptoms,) in any instance unconnected with the conditions which I have specified.

It will be remembered that Dr. Thompson's lectures, when published in the *Lancet*, attracted considerable attention from the author's investigation of the red margin on the gum, and the importance which he attached to it, as a sign of phthisis. We take the following, on that subject, from the work before us:—

In the investigation of chronic diseases, one of the most important objects is to ascertain, as far as possible, the condition of the blood, and the degree of firmness or tenuity of the bodily structure in general. * * The introduction of some poisons into the system, is occasionally manifested at the edge of the gums, where they are reflected around the teeth. * * Considerable attention to this inquiry, has impressed me with a conviction of the frequent existence, in consumptive subjects, of a mark at the reflected edge of the gums, usually deeper in color than the adjoining surface, and producing a festooned appearance by the accuracy with which it corresponds with the curve of the gingival border. This mark is, in some patients, a mere streak—in others, a margin, sometimes more than a line in breadth. In the most decided cases, this margin is of a vermilion tint, inclining to lake. * * As a general rule, the line is most distinct around the incisor teeth, but it is frequently apparent also round the molars.

I have requested my clinical assistant Dr. Bateman, to draw up a table of the appearance of the gums in the forty-seven cases under his immediate supervision. In the first division, containing the particulars of twenty-six men, you observe that only six are free from the margin, and that twenty who present the margin, have also distinct symptoms of consumption. In five of those without the line, there is also freedom from other consumptive symptoms; the diseases in these patients being respectively emphysema of the lungs, hydatid cyst, diseased liver, pleurisy, and diseased heart. Only one of the phthisical males, a boy, aged twelve, has unstreaked gums; and although the margin is occasionally observable in children, it appears to me, as far as I have yet noticed, to be more frequently absent in them than in adults. * * *

You will see that of twenty-one phthisical women, there are no less than eight without the margin, and it is remarkable, that in each of these cases there is cavernous cough or other undoubted evidence of the existence of vomica. The exceptions amongst the female patients are far more frequent, as is apparent from the table.

Mr. Thompson says that this appearance is not confined to advanced phthisis, but is sometimes one of the earliest signs present.

In the hospital with which the author is connected, more than 600 gallons of cod-liver oil are used annually in the treatment of phthisis.

Our usual plan, says he, is to give one or two drachms twice a day at first, gradually increasing the quantity to half an ounce three times a day, and I have seldom found any advantage accrue from going beyond this limit. * * You may wish to form an opinion regarding the comparative efficacy of the different kinds of cod-liver oil. In my early trials of the remedy, six years since, forty or fifty cases were treated with the coarse kind, resembling what is used in preparing leather, and the average benefit derived, did not materially differ from that effected by the purest varieties subsequently employed. At a later period, I had the curiosity to try these different kinds, combined with liquor potassæ and peppermint oil, giving alternately the coarse and the purified cod oil, and recording the report of the patients; and it is a curious fact, that the majority actually gave the preference to the mixture in which the coarser oil was introduced. Objections have been made to this combination as complicating the treatment with the addition of a medicine, by some persons supposed to be inappropriate; but my experience is favorable to the use of liquor potassæ, especially in the early stage of phthisis, and theoretical arguments might be adduced in its favor.

Occasionally, although not frequently, the stomach rebels against the oil however purified, and in whatever combination; and I have been accustomed in consequence, under such circumstances, to introduce the oil endermically.

Three years since I was requested to see a gentleman, from the country, confined to his bed, emaciated, hectic, and, apparently, failing rapidly, with a cavity at the apex of the right lung. There was considerable diarrhœa and thinking the internal use of cod oil unseasonable, I ordered an ounce, combined with oil of lavender, to be rubbed into the chest night and morning. This gentleman gradually rallied, and returned to the country, where he advanced much in strength and weight, and rode about on horseback. I examined him last year, and, judging from the physical signs, found the size of the cavity materially reduced.

Other cases are given, showing, apparently, benefit from cod-liver oil thus used, and the author quotes from a Dr. Klencke, who believes that he has improved the condition of cats and dogs, by an endermic application of this agent.

Dr. Thompson is of opinion that hæmoptysis, when active, contra-indicates the use of the oil, as this enriches the blood, but when the hæmorrhage is passive, " means which tend to enrich the blood, are calculated to lesson the hæmorrhagic tendency, and its occurrence is by no means an adequate reason for the discontinuance of the oil." So diarrhœa, unless there be an erethitic state of the alimentary mucous membrane, the author thinks does not contra-indicate its use; on the other hand, he believes the medicine rather astringent than laxative.

An account of Dr. Thompson's experiments with various remedial agents should not be omitted. Considering the composition of cod-liver oil, he was induced to try animal charcoal, in doses of fifteen to twenty grains, but with no perceptible benefit, except, that it occasionally checked diarrhœa. Olive and almond oils, were also useless, and the former occasionally caused nausea. The animal oils, at the head of which stands cod-liver oil, he considers of undoubted benefit. In 1849 he treated fourteen patients with oil obtained from the foot of the young heifer (neat's-foot oil). Three of these patients derived essential benefit, the disease being arrested, four were slightly relieved, five received no obvious advantage, and two retrograded rapidly. Excepting cod-liver oil, this remedy was the most beneficial of any tried. Sperm oil, and almond oil, with phosphorus—the phosphorus being given because cod-liver oil contains it—appeared productive of some, but not very decided benefit.

The author quotes from various writers to show that in different countries and ages, remedial powers has been attributed to the fish and other animal oils, and he continues—

The conclusion to which the observations just detailed conduct us, is, that the other varieties of fish oil, differ from that obtained from the liver, rather in degree of palatableness and agreeableness to the stomach, than in any essential difference of virtue; that neat's-foot oil is less strictly similar; modifying the blood, indeed, in a corresponding manner, but differing from the liver oils in degree of aptitude for assimilation, according to peculiarities in the digestive organs of the individual patient. It may therefore be regarded, not so much as an equivalent, as a rival to the cod-liver oil. Where cod oil fails, sperm or whale oil would probably be useless, but the failure of the oleum jecoris aselli is no proof that the oleum bubulum may not be administered with the hope of advantage, and from its greater cheapness, and less penetrating odor, it might be largely tried in the way of inunction. Either oil may sometimes be advantageously substituted for the other, and although that of the cod will in the majority of cases prove most effectual, I think you are now in the possession of facts showing that the neat oil is likely to prove a useful addition to our medical resources, and that both these oils probably act similarly, in combining with albumen, and assisting in the supply of the chyle granules which enrich the blood.

I must not conclude this letter without impressing on you the importance of the persevering use of animal oils, when they are found appropriate. We must give them sometimes alternated with steel, or other tonics, even for many years, if we would overcome the liability to a return of the symptoms.

The statement made in this lecture regarding vegetable oils requires an important qualification, in consequence of experiments which I have made during the first eight months of the present year (1853), with oil of cocoa-nut, which appears to me to possess medicinal properties similar to those of cod-liver oil. The results in the first thirty patients to whom I administered it, bear comparison with those obtained in the first thirty-seven patients for whom I prescribed cod-liver oil, chiefly in the year 1845, as related to the *Medical Society* of London, and briefly described in some of the medical journals (*Lancet*, June 27th, 1846.) Amongst the patients to whom cocoa-nut oil was given, there were some instances of arrested phthisis, as decided as any I have been accustomed to attribute to the use of cod-liver oil, over which it possesses advantages in reference to economy and palatableness; and it is interesting to remark, that its efficacy was experienced by some who had previously taken cod oil uselessly, and by others who had discontinued it on account of nausea.

We cannot close this notice of Dr. Thompson's work, without expressing our satisfaction in its perusal. The position of the author, the statistical data upon which his conclusions are based, and the candor which marks his reasoning, will render his treatise acceptable to the profession.

BIBLIOGRAPHICAL NOTICES.

ART. XIII.—*Archives de Physiologie de Thérapeutique et d'Hygiène, sous la Direction de* M. BOUCHARDAT. No. I. January, 1854. Germer Baillière, Paris. pp. 376.

THE first number of this periodical has been received from the publisher. According to the announcement, the *Archives* will be issued quarterly in numbers of from 150 to 300 pages in 8vo. The number before us contains the elaborate Essay of M.M. Homolle and Quevenne upon Digitaline, which obtained the prize of 1000 francs in 1844, from the Société de Pharmacie. As we have already given our readers, in a former number of this journal, (Sept. 1851,) an analytical notice of this monograph, we have only to add, that its authors have continued their investigations with a painstaking, conscientious spirit; but so far as we have discovered, have not found reason to change the opinions which they expressed in the original article, and have rather strengthened old facts than added new ones. They have pursued a system of vigorous experimentation which gives to their work an exact and scientific tone; and we shall expect to find the same qualities in the future numbers of the *Archives*, as it is the intention of the director to publish therein those researches which have been pursued for a series of years, and have been executed upon so large a scale, that they cannot find a place in the ordinary scientific periodicals.

The May number contains a memoir of M. Quevenne, upon the physiological and therapeutical action of the preparations of Iron. Each number will be devoted to one monograph on some special subject, and will be sold separately.

ART. XIV.—*Anatomical and Physiological Observations.* By JOHN STRUTHERS, M.D., Lecturer on Anatomy. Part II. Edinburgh: 1854. 8vo. pp. 239.

THE essays which this volume comprises, have for the most part already appeared in the Medical Journals. They were originally prepared for the students which attended the author's lectures, during the last winter, and now appear in a separate volume, with such notes and additions as his other engagements would allow him to make. These papers are sixteen in number, under the following heads:—1. On the Supracondyloid Process; 2. On the Oblique Muscles of the Eye in Man and Vertebrate Animals; 3. On Double Stomach in Man; 4. On the Nerves of the Orbit; 5. On open Foramen Ovale and the Fœtal Heart; 6. Case in which the Pulmonary Artery gave origin to the Descending Aorta and Left Subclavian Vein; 7. Anatomical Inquiry into the Mode of Action of local Blood-Letting; 8. Dissection in a Case of Paralysis of the Common Motor Oculi Nerve; 9. Description of an Esquimaux Female Pelvis; 10. On the Semilunar Valves of the Heart; 11. On Rudimentary Ribs; 12. On Branches from the Fifth Pair of Nerves to the Muscles of the Eye; 13. On Diverticula from the Small Intestines; 14. On various points of Anatomy, considered in a Review; 15. On the Abnormal Anatomy of the Arm;

16. On the Fascia of Scarpa. In the preparation of these papers, the author exhibits much patient research, with a philosophical cast of thought. The contents of the second part are announced in this, and we shall forbear noticing critically any of these papers, until the appearance of that volume.

ART. XV.—*The Modern Treatment of Syphilitic Diseases, both Primary and Secondary; comprising the Treatment of Constitutional and Confirmed Syphilis by a safe and successful Method;* with numerous Cases, Formulæ, and Clinical Observations. By LANGSTON PARKER, Surgeon to the Queen's Hospital, Birmingham. From the third and entirely re-written London Edition. Philadelphia: Blanchard & Lea, 1854. 8vo. pp. 316.

SINCE the issue of the first edition of Mr. Parker's work, in 1838, Syphilis has been studied in all its forms, with a degree of enthusiasm and rivalry never before known. That edition was nothing more than a compilation, and as such reflected very truthfully and completely the existing state of knowledge on that subject. The present edition, however, makes somewhat higher pretensions. It is in truth a new work, as every line has been carefully revised, and entirely re-written where the author's views have changed, and the whole amount of matter has been greatly increased by the additions which have been made. It contains now the result of the author's experience in hospital and private practice, extending over a period of twenty years, during which he has personally treated more than eight thousand cases. These cases have all been carefully tabulated, thus rendering available in the preparation of the present work, a vast amount of valuable clinical knowledge. The opinions here advanced, and the rules of practice recommended, may, therefore, well be regarded in the light of high authority. The author enters but little into a discussion of the mooted points of the subjects which he treats, directing attention rather to matters of practical interest. The work abounds with details of illustrative cases, and the most useful formulæ in the treatment of the various forms of this disease, are very properly given.

ART. XVI.—*A Clinical Introduction to the Practice of Auscultation, and other modes of Physical Diagnosis, in Diseases of the Lungs and Heart.* By H. M. HUGHES, M.D., Fellow of the Royal College of Physicians, etc., etc. Second American, from the second and revised English Edition. Philadelphia: Blanchard & Lea, 1854. 8vo., pp. 304.

Auscultation and Percussion. By DR. JOSEPH SKODA. Translated from the Fourth Edition, by W. O. MARKHAM, M.D., Assistant Physician to St. Mary's Hospital. Philadelphia: Lindsay & Blakiston, 1854. 8vo., pp. 380.

THE two works whose re-publication is here announced, are of widely different pretensions as well as merit. The work of Dr. Hughes is designed as a manual for the student, "to prepare and to help him to examine for himself," and for that reason is "simple, plain, and colloquial." The well known facts in auscultation and percussion, are stated concisely yet intelligibly, to the avoidance of the introduction of extraneous matter, and the discussion of merely theoretical notions. It is well adapted, therefore, as a manual for the learner, or as a guide book for the practising physician, who has no leisure to search for practical hints in large treatises. It will be perceived that this is the second American, from the last revised and enlarged English edition.

The work of Professor Skoda, of which we now have the pleasure of welcoming an American edition from the translation of Dr. Markham, belongs to a far more consequential and important, yet not less useful class of publications. The author cultivates the field of original inquiry, and boldly advances as the pioneer in the science of physical diagnosis. The peculiar views advanced in this volume have now been before the profession since 1841, when the first edition was published at Vienna, and have during that long period been the subject of unsparing criticism. Still they have quietly triumphed over the prejudices of professed critics and jealous rivals, and the fourth edition of his work finds many and ardent admirers. We must reserve for a future occasion an illustration of the theories of Professor Skoda, many of which from their direct antagonism to commonly received opinions, deserve the most serious and attentive consideration. Meanwhile we commend this work to the attention of the student of physical diagnosis, and urge its careful perusal both from the high position and authority of the author, and the intrinsic merit of his investigations.

Art. XVII.—*Healthy Skin: a popular Treatise on the Skin and Hair, their Preservation and Management.* By Erasmus Wilson, F.R.S., Author of "a Treatise on Diseases of the Skin," etc. Second American, from the fourth and revised London Edition. With Illustrations. Philadelphia: Blanchard & Lea, 1854. 8vo., pp. 291.

This little volume designed for popular instruction, in regard to the management of the skin in health and disease, has been well received, as is seen by the demand for the fourth London, and a second American edition. Mr. Wilson ranks deservedly among the best teachers in this department, and his work as we should anticipate, abounds in useful and instructive matter.

Art. XVIII.—*A Universal Formulary: containing the Methods of Preparing and Administering Officinal and other Medicines;* the whole adapted to Physicians and Pharmaceutists. By R. Eglesfeld Griffith, M.D. A new edition, carefully revised, and much extended, by Robert P. Thomas, M.D. With Illustrations. Philadelphia: Blanchard & Lea, 1854. 8vo., pp. 651.

This edition of Dr. Griffith's work, has been greatly improved by the revision and ample additions of Dr. Thomas, and is now we believe one of the most complete works of its kind in any language. The additions amount to about seventy pages, and no effort has been spared to include in them all the recent improvements which have been published in Medical Journals and systematic treatises. A work of this kind appears to us indispensable to the physician, and there is none that we can more cordially recommend.

PART THIRD.

FOREIGN MEDICAL RETROSPECT.

PRACTICAL MEDICINE.

Abdominal Tympany.—The following interesting clinical lecture by Dr. O'Ferrall, we take from the *Dub. Hos. Gaz.*—Abdominal tympany is met with under various forms; it announces the meteorism of fever, and it accompanies many of the inflammatory and nearly all obstructive diseases of the alimentary canal. There is one form, however, which seems allied to the condition termed hysteria, but which presents some physical characters simulating organic disease, and which requires some patience and care in order to establish a satisfactory diagnosis.

A girl, twelve or thirteen years old, is brought to you for advice, on account of supposed abdominal disease. You observe that she is pale but not emaciated; that the abdomen projects unnaturally, and that her mode of progression is very peculiar. The chest is thrown back, the arms hang, the spine is remarkably curved, and the child walks exactly like a woman ballancing a large ovarian tumor or gravid uterus. The usual percussion in the erect position will soon enable you to assure yourself that there is no dropsical effusion into the peritoneum. You now proceed to examine the abdomen in the horizontal position. Expiration is imperfect, and the respiratory act becomes frequent and embarrassed as the examination proceeds. You remark that the tumefaction is not uniform; a shallow transverse depression running across, a little above the umbilicus, marks the abdominal swelling into two portions. In a girl, aged thirteen, recently measured, the circumference of the abdomen across the upper portion was 32 inches; across the lower portion of the abdomen 59½ inches; and across the middle, 27½ inches. The abdomen generally feels resisting, and remarkably elastic; the resistance at the right hypochordrium gives a sensation of a more solid nature, and in some instances pressure in this situation appears to make the patient wince. It deserves to be remarked, however, that the seat of sensibility is not always the same in different cases. Percussion over the lower half of the abdomen elicits a loud and prolonged resonance; over the left hypochondrium the tympathy is short and more acute in tone, while in the right hypochondrium a distinct and marked dullness is afforded to percussion.

Now with this evidence before you, to what conclusion can you reasonably arrive? There is no dropsy, and the existence of mesenteric or malignant disease appears opposed by the general condition and expression of the patient. Hepatic enlargement appears the most probable supposition. But the position in which the patient is lying, with the spine arched prominently forward, instead of receding from the pressure of examination, throws a difficulty in the way of this opinion. This want of accordance between the symptoms and physical signs, leads you naturally to examine the thoracic cavity. You proceed to percuss the right chest from above downwards; percussion yields a clear sound down to, and even below the very margin of the false ribs. This solves the difficulty, and proves that the dullness in the right hypochondrium cannot proceed from enlarged liver, because, if this viscus was enlarged, its increase in the upward direction would necessarily have compressed the lung, and produced dullness as high, perhaps, as the nipple.

But there is the hypochondriac tumor, what can it be? If not an enlarged liver, what is it? Why, manifestly, a displaced liver. There is dullness on percussion below the margin of the false ribs, where it ought not to be; and above the margin of the ribs, where it ought to be dull, it is clear. Something has evidently pushed the liver down from its place, and against the anterior walls of the abdomen; what can that be? It is not any thing contained within the cavity of the thorax. There is no evidence of either emphysema, pneumothorax, nor empyema; and if nothing within the chest has pushed down the diaphragm, in the manner indicated by the displaced liver, it is most likely that the diaphragm must have descended by its own contraction. It is difficult to imagine a strained contraction of a muscle, like the diaphragm, for long periods of time; but there seems to be no other means of accounting for the phenomena. And when we consider the many well authenticated cases of long-sustained muscular tension which have been recorded as having occurred in catalepsy, as well as in the so-called mesmeric condition, it does not appear unreasonable to suppose that such a persisting contraction of the diaphragm and abdominal muscles may be maintained in certain states of the nervous system, and produce physical signs similar to those I have described. Watchfulness is often a characteristic of this peculiar condition. In general, it will be found impossible to discover the patient in a state of sleep so profound as to render them unconscious of examination.

In a case of this kind, recently under observation in St. Vincent's Hospital, all other means of procuring temporary relaxation of the muscles having failed, it occurred to me that the cautious use of chloroform might be employed for this purpose. This was done before the class of pupils, to whom, as an instance of abdominal tumor, the case was an object of peculiar interest. Being very cautiously employed, the chloroform was very slow in its operation. The pulse remaining satisfactory, it was persisted in until a condition of sleep was produced. The most remarkable change now took place in the appearance of the abdomen. The recti muscles became relaxed, and sank backwards, until the surface of the abdomen became actually concave. The upper and lower tumor subsided, and now, on percussion, the dullness beneath the ribs was replaced by a moderate degree of resonance, and percussion on the lower ribs no longer sounded preternaturally clear; the diagnosis was complete. As soon as consciousness returned, the tumor was found to possess every character as before described.

Sir Benjamin Brodie has described a curious state of the voluntary muscular system, in which paralysis of the lower extremities was supposed to exist, but in which there is really only required a strong will on the part of the patient in order to develop the seemingly absent power. In practice we frequently meet with such cases, and there is reason to believe, with Sir. B. Brodie, that the want of a strong will to execute the power is the essence of the morbid condition. It would be a curious subject of inquiry, whether a condition nearly opposite of the nervous system may not exist, in which with scarcely a consciousness on the part of the patient, muscles known to be voluntary are capable of extreme and prolonged contractions, in defiance of all advice or persuasion, and to the manifest inconvenience, and even suffering, of the individual.

Cases like that here described are occasionally subjected to treatment, the result of erroneous diagnosis, founded upon a hasty or imperfect physical examination. I have known instances where the iodine plan was carried to its utmost limits, in the hope of reducing a supposed abdominal tumor. The treatment should consist of such means as are calculated to improve the general tone of the system and promote a cheerful temper; shower baths, calisthenic exercises, and exercises in the open air. The bowels are, in many cases, regularly moved, although the swelling persists, and terebinthinate purgatives have no effect upon it. I have known the lower swelling diminished by the rectum tube, but the return of the swelling almost immediately succeeds its employment. The chalybeate preparations are generally indicated by the state and appearance of the patient. Moral treatment is not without its influence; but nothing in this way will avail without obtaining the confidence of the patient in your friendly disposition towards them.

The physical diagnosis is, in those cases, that on which you must rely, to prevent your employing injurious remedies. Now, in a careless examination, physical evidence might create a difficulty; if limited to the abdomen itself, it might confirm any previous suspicion of the existence of abdominal disease; extending, however, the field of its application, physical evidence removes the difficulty, and throws a clearer light upon the physical condition of the organs. Physicians of large experience must be familiar with, and prepared for such difficulties; but the student cannot have too many aids to guide him in his investigation of obscure disease.

[The employment of Chloroform in hysterical cases simulating pregnancy has been highly recommended by Prof. Simpson. The distended abdomen immediately becomes collapsed, and admits of the most satisfactory exploration.]

On the Treatment of Gangrene of the Lung by Inhalations of Turpentine Vapor.—Four cases of gangrene of the lung have been treated by Professor Skoda in the following manner: The essence of turpentine is poured upon boiling water, and the patient is directed to inhale the vapor for fifteen minutes every two hours. Sulphate of quinine is administered also in the usual doses. The first case was that of a servant affected with limited gangrene of the superior lobe of the right lung. After six weeks of this treatment, it became impossible to detect either infiltration or gangrene of the organ. On the contrary, the respiratory murmur had returned over the whole region. Three months afterwards the patient was seen in good health. In the second case, an inn-keeper of mature age and strong constitution became the subject of a gangrenous cavity in the lower lobe of the right lung, consequent upon disease commencing March 11, 1852. On March 21, the patient commenced the inhalations of the vapor of turpentine: he continued without repugnance, for five or ten minutes every two hours, taking, at the same time, the usual doses of quinine. At the end of three weeks, the expectoration, which had been extremely abundant (a pint and a half daily,) became reduced to a quarter of a pint. The inspirations had been employed four times a day. At the end of six weeks, the patient could quit his bed. His strength was returning, the appetite was improved, and his general aspect favorable; but the expectoration continued to be fetid from time to time, and was always sanious. The right side of the chest was painful, and respiration labored, but the air entered the circumference of the lower lobe; the respiration being uncertain and accompanied by feeble râles and sibilance. The patient went into the country, where he continued the turpentine inspirations twice a day up to the middle of July, when both cough and expectoration had entirely disappeared. In the month of December, 1852, he came to M. Skoda for a certificate of health. There was no pain, nor oppression, nor cough. He had recovered his *embonpoint* and his strength; there was no retraction of the thorax; vesicular respiration every where. In the third case it was not in the Professor's power to persist in the plan. The fourth case is still under treatment. A butcher, of strong constitution, had a gangrenous cavity in the inferior lobe of the left lung. He fell ill about the end of May, 1852. The inspirations of turpentine were commenced June 4. At the end of a week, the fetid expectoration, which daily equalled two pints, had entirely disappeared, and the patient considered himself well, because the pain and the oppression in breathing had diminished; the appetite was returned, and the sleep was tranquil. He, therefore, left off inhaling the turpentine, which was extremely disagreeable to him. On June 19 there came on a severe shivering fit, with cough and dyspnœa, and during the following night the patient expectorated several pints of extremely fetid sanies of dirty brown color. The inspirations were recommended, but the patient used them as little as possible, on account of the irritation which they produced in the air-passages. In eight days the quantity of matter brought up had greatly diminished, and the pulse was normal, but there was pain in the chest. The patient lay immoveable upon his back in a state of great weakness and prostration; there was no appetite. The lower lobe of the left lung was impervious to air. The inspirations were again suspended, but again recommenced on account of the recurrence of the bad symptoms; the disagreeable odor of the turpentine being partly rectified by a few drops of the essence of rose. About the middle of October he was able to go into the country, having recovered strength sufficient to leave his bed; nevertheless there remained a sense of oppression and pain under the left scapula. At the end of January he considered himself well. There was a sudden expectoration of two ounces of blood, after a slight fit of coughing, on February 10, probably proceeding from the callous walls of a former grangrenous cavity; but there are no signs of further infiltration, and the case seems likely to terminate well.—*Dublin Hospital Gazette.*

Spasmodic Tic (?) in new-born Infants. By Alfred H. M'Clintock, M.D.—The diagnosis in these cases lay between paralysis and spasmodic tic, an affection so designated and first described, I believe, by Marshall Hall, and which Romberg calls "mimischer gesichtsschmertz"—a term which his translator, Dr. Sieveking, thus renders: "histrionic spasm of the face." The symptoms, carefully weighed and considered at the time, inclined me, and two very competent observers who saw these cases along with me, to the opinion that they were not examples of ordinary facial paralysis. Be this point as it may, however, they are still highly interesting, and have a direct bearing upon the subject of nervous pathology.

Case 1.—Mrs. B. was delivered of her first child after a rather protracted labor. Ergot of rye was administered towards the conclusion, as the pains were very inert; the child, a well grown boy, was still-born, but by the employment of the ordinary restoratives was completely resuscitated. The next morning it presented the following appearances:—Upon the occiput and posterior part of the *right* parietal bone was a tumor, such as is commonly found after tedious labors. On the *left* side of the head, and corresponding to the temporal ridge, was a superficial yellow slough, about an inch and a quarter in length, surrounded by an inflammatory margin. As long as the child was at rest, no change in the features or symmetry of the face was observable; both eyes opened and closed nearly alike, at least, when in the former state, the lids of the right were, perhaps, a degree farther apart than those of the left. When the facial muscles were called into action, great distortion resulted on the *left* side—the corner of the mouth and *ala nasi* being drawn up and the eye tightly shut; at the same time, the right side of the face was not utterly blank and void of expression, as we see it in paralysis. Local treatment was applied to the injury on the left side of the head, and in the course of a few days the wound put on a healthy appearance, and healed rapidly. A considerable improvement also took place in the distortion of the countenance, and at the end of a fortnight, when the child ceased to be under observation, scarcely any difference existed between the two sides of the face.

Case 2.—A woman was delivered, after twenty-four hours illness, of a fine healthy boy. At next visit the nurse called my attention to the child's face, which on a first glance, seemed paralysed on the *right* side; a more careful scrutiny, however, altered this opinion. During the quiescent state of the features, no difference was discernible between the right and left sides; but when the child laughed or cried, then the muscles of the *left* side were thrown into strong action, and considerable distortion ensued. From the close similarity in the symptoms with those of the former case, I was lead to examine the child's head: a small grey slough, surrounded by inflammation, was discovered on the integument covering the *left* parietal bone, near its anterior inferior angle. The treatment employed was purely local, and in the course of some days the facial muscles acted with undisturbed harmony.

Paralysis of one side of the face, apparently from compression of the *portio dura* in labor, has been frequently noticed. Osiander,[*] Landouzy,[†] and Evory Kennedy,[‡] have each met with, and recorded examples of this. In all such cases the paralysis was, of course, on the same side with the injury. Now, in the foregoing cases, the reverse was the fact, the seeming paralysis being on the side opposite to the injury. This circumstance, taken *per se*, is certainly not of any positive value as disproving the existence of paralysis (though it may serve to account for the opposite condition); but setting it aside altogether, and confining our attention to the *right*, or apparently palsied half of the face, certain peculiarities were observable, unlike what is ordinarily seen in paralysis of the muscles supplied by the facial nerve, and tending to suggest doubts as to the actual presence of any such condition. For example, each patient had full command over the orbicular muscle of the right eye; in one instance, certainly, this eye was slightly more open than its fellow. but there was no other evidence of any impairment in the motor power of the orbicularis muscle. Again, in smiling, laughing, or crying, this same side did not at all present that blank, expressionless appearance which is so characteristic of a paralysed condition of the facial muscles; on the contrary, it struck us, on the moment, that the partial want of animation in this half of the face was owing to the undue and preponderating action of the muscles belonging to the other half. Subsequent and more mature reflection inclines me to think that this opinion has some foundation in facts, and is sustained by analogy. and I have headed this communication accordingly, as some denomination should be given to it; but I am far from asserting dogmatically that the *right* name has been selected. It is to be regretted that these cases were not reported more in detail, seeing that they involve so delicate a point of diagnosis; but, in fact, they occurred when I was assistant at the Lying-in Hospital, and I merely noted down, at the time, the salient features of each case. By a curious but not uncommon sort of coincidence, they presented themselves to my notice within a few weeks of one another, and no additional instance, of a similar nature, has since come under my observation." *Dub. Hos. Gaz.*

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[*] *Handbuch der Entbindungskunst.* Vol. ii.

[†] *Brit. and For. Med. Review.* Vol. x.

[‡] *Dub. Medical Journal.* Vol. x. (Old Series).

Gallic Acid in cases characterized by Excessive Secretion. By W. Bays, M.D.—It is obvious, that while in some cases excessive secretion is in itself a diseased action, that in others it is an effort of Nature to cast out some poison or peccant matter circulating in the blood, and therefore curative. We have examples of the former in pyrosis, and of the latter in the sweats of rheumatism, in the diarrhœa which precedes erysipelas, and some other disorders, and which proves critical in some fevers. Still, after rejecting all these as unfit cases for the exhibition of gallic acid, a large number yet remain, in which excessive secretions result from debility, or a generally relaxed state of their natural organs, or of the capillaries of the parts whence they are excreted. Where this obtains, there is certainly no remedy which acts more pleasantly and admirably than gallic acid, giving, as it does, general tone and vigour without the slightest tendency to induce febrile excitement. In pyrosis, where this disease is unaccompanied by extensive ulceration, or organic malignant disease of the stomach, or by disease of the liver, the most marked benefit will follow the use of the remedy. Gallic acid, here, not only checks the secretion with a certainty and rapidity I have never seen follow the administration of any other remedy, but it gives general tone to the stomach, increases the appetite, and (what I very little expected when I first used it) in many cases removes constipation. This I can only account for on the supposition that the relaxed atonic state of the stomach which favors pyrosis is continued throughout the alimentary canal, the constipation in these cases arising from want of power in the muscular coats of the intestines to expel the fæces. This want of tonicity is remedied by galic acid. The cases of pyrosis which have fallen under my observation, since I have adopted the gallic acid treatment, have been very few; indeed I believe it to be a very infrequent form of disease in Brighton. Out of 945 cases of general disease, which have come under my care at the dispensary during the past twelve months, only eight patients have suffered from this disorder. These have been all females. I have the notes of five of these cases before me. The first was a female of twenty-five years of age, unmarried; she had been for eight months suffering from pyrosis and obstinate constipation, during which period nearly every remedy of reputed value had been administered. She was completely cured in two days. I kept her under my care for three weeks, continuing the gallic acid and occasional doses of castor-oil. I have seen her since, and though some months have elapsed, she has remained perfectly well. The second case was a female, forty-nine years of age. The pyrosis ceased after the second dose of the medicine. She discontinued the treatment a week afterwards, and had a slight return the following morning, which again gave way to the medicine, and by a continuance of the pills for three weeks she has remained perfectly well ever since. In the third case, the remedy proved equally successful. In the fourth a married woman of thirty-five, who had suffered from the disease nine months, this distressing symptom abated considerably at the fourth day, and entirely left her on the eighth day. In the fifth case, a female of forty-five, there was no return after the first dose. In one case only have I found it fail, and this woman is still under my care; she is forty-nine years of age, and is, I fear, the subject of malignant disease, together with organic disease of the liver. All the first five cases presented a general similarity in the relaxed muscular fibre of the body, and pale watery appearance of the mucous surfaces. In diarrhœa and dysentery, after the removal of any irritant matter by a gentle aperient, I have found the diseases yield, and a healthy tone easily restored to the intestinal membrane, by moderate doses of gallic acid every two or four hours, with a teaspoonful of castor-oil every morning. There is a class of phthisical cases to whom gallic acid is an almost inestimable boon. I allude to those in whom the expectoration is frequently tinged with blood, and who no sooner appear to improve a little in general health and strength, than slight hæmoptysis recurs and again reduces both. I have at this time several such cases under my care, who are improving slowly yet steadily under five-grain doses of gallic acid taken three times daily, in conjunction with cod-liver oil and other remedies. In one of these cases the man has been now under my care for twelve months. When I first saw him, he was reduced almost to a last extremity by the constant hæmoptysis and profuse expectoration, and suffered so greatly from dyspnœa as to be unable to follow his occupation (that of a painter). Three vomicæ have discharged themselves since he has been under my care, and yet he is improving, and has for the past ten months been able to resume his business, and to continue it all through the winter, and can walk up hill or mount stairs without much distress. While he continues both cod-liver oil and gallic acid, he does well; if he leaves off the one, his hæmoptysis returns; or if he discontinues the other, he becomes weak and languid. Gallic acid is also valuable in conjunction with the oil, in enabling the stomach to bear it without nausea. Another great benefit to phthisical patients from the exhibition of gallic acid is the tone it imparts to the stomach, restraining the inordinate appetite and promoting its power of digestion. The stomach is often greatly enlarged in this disease, and its coats relaxed and atonic, hence the benefit alluded to. In the distressing night-sweats and diarrhœa which characterize some stages of phthisis, the remedy, though of the utmost service, requires a nice discrimination in its use. It must be commenced in small doses and carefully increased, since the cough will be aggravated materially if the secretions be too suddenly suppressed. But if gradually increased doses be given, I have found that not only are the sweats and diarrhœa moderated, but that the breathing becomes more easy, the expectoration causes less effort, and the digestion greatly improves. The reason of this varied improvement easily appears, if we bear in mind the single action of gallic acid, its solubility and entrance into the blood. It contracts the capillaries and glandular apparatus of the alimentary canal. It contracts their walls, and diminishes their general calibre. It gives the same power of contraction to the elastic and muscular tissues of the lungs, thus enables them to expel accumulations of mucus or pus, and it produces the same action on the skin, enabling it to check the exhausting exudation from its surface. It is evident while contemplating these various demonstrations of the power of the remedy, that in order to produce benefit in phthisis, they must be only gradually brought to bear on the secretions, and that great care must be exercised lest too sudden an impression be produced. In chronic bronchitis the same caution must be used in checking the profuse expectoration, but I know no remedy more easily managed than gallic acid, and none so calculated to permanently arrest the diseased secretion, and to restore tone to the bronchial tubes and their lining membrane. I ought parenthetically to observe that I have always found that penciling the tonsils and uvula with a solution of nitrate of silver (of from five to ten grains to the ounce) night and morning, greatly assists in relieving the cough both of phthisis and bronchitis. The dose I have given in these cases has been from five to ten grains ter die. In diabetes we should expect some benefit from gallic acid.—*Assoc. Med. Jour.*

Failure of Male Fern and Kousso in the Treatment of the Tape Worm.—The following remarks are appended to the histories of several cases in the *Edinburgh Monthly Journal*, in which extract of male fern and kousso failed to dislodge the tape-worm, by George Patterson, M.D.—1. It would appear from the above cases that the kousso and œtherial extract of male fern, are, like all other remedies that have hitherto been prepared for tape-worm, liable to, at least, occasional failure. At the same time it is certain, from the effects that followed upon their administration in these instances, that they are remedies of great power, very obnoxious to the parasite, and therefore valuable additions to our means of treatment.

2. I should be disposed to believe from what was observed in these cases that the same remedy is not suited alike to every case; but that in one subject the kousso, in another the male fern, and in another the turpentine will be found to be the most appropriate remedy. Thus, in the second case, neither the male fern nor the kousso brought off any of the worm, while turpentine invariably did so. In the first, on the contrary, turpentine and castor-oil were repeatedly given before the male fern, without having the least effect. Again, we sometimes find the worm, not only detached and dislodged, but carried downwards and expelled by the male fern and kousso, unaided by any purgative; while at other times they require to be followed by the administration of a purgative dose. As to the comparative energy of the kousso and male fern, it would appear from the above cases (in which both were successively given to the same person) to be nearly equal, and in the phenomena attendant upon their operation both remedies are very much alike.

3. The first of the cases I have narrated is in many respects a remarkable one. It furnishes a striking portraiture of the symptoms of the disease in a very aggravated form; and the immense number of joints that were discharged at various times, both singly and in pieces of several feet in length, would seem to indicate either that there must have been more than one of the parasites in the man's body, or else that it is capable of reproduction and of attaining its for-

mer growth in an incredibly short space of time after large portions of it had been detached.

4. The same case affords an instance of the worm finding its way into the stomach, portions of it being stated to have been brought up by vomiting in round balls. This is a more common occurrence with other kinds of intestinal worms. Thus I have met with several instances, both in children and adults, where lumbrici have escaped by the mouth or nose. In one case of an hysterical and hypochondriacal female the circumstance of one of these worms having escaped by the mouth produced an impression that she still had one in the windpipe. The sensation, which was partly hysterical and partly perhaps due to an enlargement of the thyroid body, led to continual efforts to bring up the worm and dislodge it with the finger, which necessarily produced increased local irritation, and the failure of which aggravated her despondency and low spirits. She vainly resorted to several medical men, including myself, for relief—neither reasoning nor such remedial measures as the nature of the case suggested having succeeded in overcoming the delusion.

5. In the second case we have an instance of the co-existence of another kind of worm with the tape-worm. This is worthy of notice, principally as showing (what has been pointed out by Dr. Watson and others) that the term "solitaire," which some French writers have applied to this worm as a distinguishing characteristic, is not correct.

6. Besides the above three cases falling under my own notice in the course of a few months, I have heard of another instance under the care of one of the medical gentlemen of this town, in which the kousso brought off several yards of a tape-worm, but equally failed to eradicate the disease. One would be almost disposed to argue, from so many instances of a somewhat rare affection observed within a short period among persons, the majority of whom are natives of the place, that the disease is more than usually common in this locality. On inquiry, however, among the oldest practitioners of the town, they inform me that this is by no means the case, and that whatever fortuitous circumstances may have concurred to multiply instances within so short a period, their experience of such cases is not larger than that of the generality of medical men in other places.

Cardiac Murmurs without Valvular Deformity.—At a recent meeting of the Medico-Chirurgical Society of Edinburgh, Dr. W. T. Gairdner stated that the result of his inquiries on this subject were as follows:—1. It is impossible in the dead heart to imitate precisely the physiological conditions of the closure of these valves, so as to prevent reflux. The nearest approach to these conditions is when water is injected, with moderate force, into a ventricle in a state of tonic contraction. The slightest amount of relaxation in the muscular fibre of the dead ventricle determines regurgitation. 2. On the right side (as was observed by Hunter and Wilkinson King) regurgitation is more certainly and more freely produced in experiments on the dead heart than on the left. The chief reason of this difference, however, is the usual absence of rigid tonic contraction after death in the right ventricle, and the greater readiness with which its thin walls yield to distention. No argument can be drawn from this difference, as to the existence of a "safety-valve function" in the living and healthy heart. 3. The impossibility of securing in the dead heart the physiological conditions of closure in the living, together with other considerations derived from the structure of the valves, prove that a certain amount of tension must be exercised upon the tendinous cords, through the muscular structures of the ventricle, before the counter-pressure of the blood upon the valves can be exerted so as to close them against regurgitation. 4. Too great tension is fatal to the closure of the valves, as well as too little; and there is reason to think that the columnæ carneæ are so disposed as to maintain, by a very beautiful and delicate adaptation, a nearly uniform state of tension of the valves throughout the contraction of the ventricle. 5. Not only must a graduated tension be exercised upon the tendinous cords, but the columnæ carneæ must be approximated at their bases, so that the whole of the tendinous cords act, as it were, from one point in the centre of the ventricle, towards which all the edges of the valvular fringe are drawn. Thus the cylindrical curtain, which hangs from the auriculo-ventricular opening during the diastole of the heart, is converted (as Bouillaud has correctly pointed out) into a cone with the apex downwards; and the counter-pressure of the blood upon the under surface of this conical curtain brings its edges into apposition, and completely closes the valve against regurgitation. 6. To sum up the physiological conditions of closure of the auriculo-ventricular valves: it is indispensable, *a.* That they shall be acted on by the columnæ carneæ, and kept thereby in a certain state of tension; *b.* That the counter-pressure of the blood shall then come into play, and float the valves upwards towards the openings which they are destined to cover; *c.* That the forces *a* and *b* shall be simultaneously exerted on the valves when in a favorable position for complete closure: *i. e.*, with the columnæ carneæ and chordæ tendineæ massed together, and the free edge of the valve drawn towards the axis of the opening. 7. All these conditions may be shown to concur in the systole of the healthy heart. 8. The condition *a* is vitiated to a greater or less extent by disease or degeneration of the columnæ carneæ or chordæ tendineæ; also by great hypertrophy or dilatation, and more particularly by hypertrophy with predominating dilatation of the ventricles. In certain cases of simple hypertrophy, however, with inconsiderable dilatation, the increase in size affects all the structures *pari passu:* and in these it may happen that the valve preserves its normal relations by the elongation of the tendinous cords and muscular columns. 9. The condition *c* is vitiated whenever dilatation predominates largely over hypertrophy; for then the contractions of the ventricles are inadequate to bring the columnæ carneæ together at any period of the systole; they remain therefore permanently apart, and the tendinous cords instead of drawing the edges of the valves *towards* the axis of the opening, may actually cause them to diverge from it. It is unnecessary to do more than point out that sacculated aneurisms of the ventricle, globular polypi between the columnæ carneæ, and other morbid conditions, may produce a like result.—*Edinburgh Monthly Journal.*

SURGERY.

On the propriety of opening the Bowels soon after the operation for Strangulated Hernia. By J. S GAMGEE, Esq.—The various conditions in which we find cases of hernia at the time of operation, admit of their arrangements under four heads. 1. Those cases in which the intestine is in good condition, and inflammation has not yet manifested itself; 2. Those in which, though the bowel is in very fair condition, there are local and general signs of a moderate amount of peritonitis; 3. Those in which the bowels are notably discolored, but of good consistence; peritonitis being intense; 4. Those in which there is threatening gangrene of the gut.

Let us consider the first class of cases. Since it is reasonable to suppose that in a case of strangulated hernia that has been operated upon, a part at least, of the uneasiness dependent upon the intestinal function is immediately due to its restoration, we should in this class of cases theoretically be disposed to promote the action of the intestines, when it does not occur spontaneously, a short time after the constriction has been removed. Such practice seems the more reasonable, in that there can be no fear of aggravating inflammation which does not exist, and in that there is reason to believe that the expulsion of the accumulated fæces is tantamount to the exclusion of a possible, if not probable, cause of inflammation.

In the second class of cases, the first part of the argument used above applies, but not the second; for inflammation exists, and the question arises, whether the administration of purgatives, theoretically indicated by the necessity of restoring the intestinal functions, may not be productive of evil by aggravating the inflammation. From what I have seen, however, these fears would not disquiet me. I think there is more chance of the progress of inflammation being checked by the expulsion of irritating fæces, and restoration of the gut to its function, than of its being aggravated by the stimulant action of the purgative.

In the third class of cases, in which the bowel is in moderate condition, but the peritoneum intensely inflamed, it is reasonable to believe that the constipation, although in great measure dependent upon the atony which has resulted from long inactivity, is likewise due to the disturbance of innervation incident upon the inflammation. It seems hence prudent to respect the objections of those who allege that the inflammation may be aggravated by purgatives; but while antiphlogistics are being actively employed, there is no reason for objecting, if the bowels do not act, to enemata; the probabilities of their doing good are much greater than those of their possible perniciousness.

In the fourth class of cases, (threatening gangrene of the intestine,) inasmuch as there is more to fear from the action of the intestines, though it be but moderate, than from their inactivity, though it be extreme, enema and purgatives appear contra-indicated so long as there is reason to fear disorganization of the gut.

From the foregoing considerations, flow three rules for practice, in cases in which the operation of herniotomy is not followed by spontaneous action of the bowels.

1. When the condition of the gut is good and there is little or no peritonitis, an oleaginous enema should be given an hour or two after the operation, and repeated after three or four hours in case of failure, or a purgative exhibited by the mouth.

2. When the peritoneal inflammation is intense, even though the bowels be in fair condition, antiphlogistics must be perseveringly employed; and though a simple enema may be given in the first six hours, it is inadvisable to excite the action of the bowels until the next day, either by more active enemata or purgatives by the mouth.

3. In the case of mortification threatening the gut, the bowels should be kept quiet by opium, and purgatives and enemata abstained from until the danger of perforation has passed.—*Assoc. Med. Jour.*

Periodical Hæmorrhage after Surgical Operations.—M. BOUISSON, of Montpellier, has brought prominently forward the fact that distinctly periodic losses of blood are occasionally met with as one of the forms of hæmorrhage after surgical operations; and that this intermittent form of hæmorrhage must be carefully distinguished from other kinds dependent on local accidents or conditions of the wound, on particular states of the blood or circulating system, on arrest of any ordinary discharge, either catamenial or hæmorrhoidal, or on physical or moral excesses. The previous abode of the patient, in a malarious locality, the regular periodic character of the hæmorrhage, the co-existence of a certain amount of febrile disturbance, and the occurrence of the bleeding at the *crisis* of the attack (as it were, as the substitute for sweating,) are the principal grounds on which we may diagnosticate this form of consecutive hæmorrhage. In certain cases all these conditions are fulfilled; but in a few, M. Bouisson believes that the intermittent character only is to be detected, there being no regular febrile access, just as we observe in the masked fevers, or *fièvres larvées.* Finally, the most interesting fact connected with these periodic hæmorrhages is, that they yield positively and promptly to full doses of quinine, even when other internal treatment, as by astringents, has apparently failed. M. Bouisson remarks that this periodic hæmorrhage from *wounds* after operations, has received little attention from surgical observers, probably owing to its rarity, except in localities prone to the development of malarious influences. In his special "treatise on periodic diseases without fever," M. Casimir has mentioned periodic bleedings from mucous surfaces, but not from wounds. Professor Sanson has briefly alluded to periodic secondary hæmorrhages, deriving his knowledge also from observations in Montpellier. Besides this nothing but scattered allusions to the subject exist in surgical literature.

The special cases brought forward by M. Bouisson may thus be analyzed. They are four in number—viz., an amputation of the great toe, in a girl 18 years of age; amputation of the leg in a male aged 36 years; amputation of the thigh in a male of 21 years; and removal of the forefinger, with its metacarpal bone, for encephaloid disease of the latter, in a female aged 34.

As to the influence of locality, the first patient came from the neighborhood of Arles, in which intermittent fevers are so common. The second was placed in a particular ward of the Hospital Saint Eloi, in which intermittent fever often made its appearance amongst the patients. No special local circumstances could be traced in the third and fourth cases. The periods at which the hæmorrhage began in each case, the number and dates of its recurrences, and the mode in which it was apparently affected by the administration of quinine, were as follows: In the first case, it began on the evening of the fifth day after the operation, before any ligatures had come away; it recurred at the *same hour* on the sixth and seventh days; during the early part of the eighth day, 10 grains of the sulphate of quinine were given, and the bleeding never recurred. In the second case, the hæmorrhage first happened on the ninth day after amputation, no ligature being loose; it recurred at the same hour on the following day; on the eleventh day, 12 grains of quinine having been irregularly given, it again happened at the usual hour, but in more moderate quantity; on the next day, the remedy being persevered in, it ceased. In the third case, the hæmorrhage began on the evening of the eleventh day, and recurred at the same hour on the thirteenth and fifteenth days, missing the intermediate days. It was diminished on the fifteenth day by 10 grains of sulphate of quinine, and arrested entirely by its repetition on the seventeenth day. Powerful astringents had been first tried. In the fourth and last case, the first hæmorrhage took place at seven o'clock in the morning of the fourth day after the operation; it was renewed at precisely the same hour on the fifth. Quinine being administered, it did not happen on the sixth day; but the patient having then neglected to take that medicine, a fresh bleeding happened at seven in the morning of the seventh day; but by subsequent attention and an increase of dose, further bleeding was arrested. In all four cases, great care was taken to determine that the hæmorrhage was a general oozing, and not from any particular vessel. Sometimes even compression was employed, but without success. In all cases, the quinine seemed alone to arrest the hæmorrhagic attack; and its use was invariably continued for some days after the bleeding had ceased. As to the general symptoms accompanying the attacks of bleeding, they were, in the first and second, well-marked, consisting of a cold and then a hot stage, at the height of which the bleeding occurred. In the third case there was no cold stage, but merely a slight febrile accession. In the fourth example no general disturbance at all was manifest: the remarkable periodicity of the attacks alone serving as a guide in the diagnosis and treatment.

M. Bouisson refers generally to other cases, collected from the clinical records of Montpellier. It is proper to add that he by no means neglects the ordinary rules of treatment in cases of consecutive hæmorrhage. That an intermittent or periodic consecutive hæmorrhage from the general surface of the stump occasionally happens—that its cause is constitutional and similar to that which gives rise to intermittent fever—and that it yields promptly to quinine—are conclusions to which M. Bouisson's observations irresistibly lead. Whether the bleeding is to be regarded, as he believes, as the substitute for the ordinary critical discharge—of sweating—and whether a periodic hæmorrhage without febrile disturbance is truly analogous to the masked fever, are points perhaps for further investigation. We commend the subject to our surgical friends living in malarious districts. —*Medico-Chirurgical Review.*

Operation of opening the membranous portion of the Urethra in Retention of Urine from enlarged or diseased Prostate. By James A. Lawrie, M.D.—The cases in which it is impossible, without force, to pass a catheter into the bladder, in retention of urine from enlarged prostate, although not numerous, constitute in my experience the greatest number of examples of impossible catheterism. I have met with three such: one in hospital practice, ten or fifteen years ago; a second, in private, three or four years ago; and a third, in private, in the course of this summer. The first was punctured above the pubes, in my temporary absence, by my friend and colleague Dr. Buchanan; the second I punctured above the pubes; and the third I relieved by the operation I am about to describe. All proved fatal. Practical writers, in describing the methods of reaching the bladder in cases of impossible catheterism from diseased prostate, allude, as far as I know, to two methods only—puncture above the pubes, and forced catheterism through the prostate gland. Both are objectionable; the first is almost always a fatal operation, and the second sometimes causes dangerous hæmorrhage, or may condemn the patient to the uncertain use of the catheter for the rest of his life. Besides which, it is at times impossible, as happened in a case in the infirmary here several years ago, in which every catheter tried, bent in the forcible attempts made to thrust it into the bladder.

So far as I know, no proposal to puncture through the perineum in this class of cases has yet been made. Sir B. Brodie says, "it will be of no service here . . . to make an opening into the urethra beneath the pubes." With all deference, this is the very operation which will be of service—it is one which I have taught for many years in my lectures, and which it is the object of this notice to recommend to my professional brethren. I shall describe the operation and add a case in which it was performed. The instruments required are, a common curved or rectangular lithotomy staff, a sharp-pointed bistouri, or lithotomy knife, and a straight metal or elastic catheter. Before Dr. Buchanan invented his rectangular staff, I used the common curved staff, grooved on its under surface; but now I greatly prefer the former, taking care that the under limb of the instrument is not too long. The patient being placed and tied as for lithotomy, the staff is introduced and held as for lithotomy—*i. e.*, pushed down upon the rectum, and the angle made to project towards the perineum. The point of the staff ought merely to reach the apex of the gland, or pass about half an inch into it. Hence the necessity for having the under portion of the staff short. The urethra is now to be opened by thrusting the knife into the groove of the staff, not deeper than merely to make sure that the canal has been opened, and immediately withdrawing it, making an incision just large enough to admit the finger. The finger being placed in the wound, a straight metallic catheter is introduced into the urethra, and lodged in its membranous and pervious prostatic portions. The staff is now withdrawn, and we have a straight catheter in a short straight canal, which a little gentle manipulation enables us to lodge in the bladder and relieve our patient. As it is of importance to have a thorough command of the catheter, I use one twelve inches long, slightly curved, and perforated at the point; the slight curve enables us to glide it under the arch of the pubes, and over a projecting third lobe, while the perforation at the point allows us to withdraw it over the probed wire, and to lodge and retain in its place a short elastic tube. The following will show that the above proposal is not merely theoretical.

Case.—Some weeks ago I was asked to see, in consultation, a gentleman upwards of 80, and found him labouring under retention of urine of several hours continuance. Before my arrival, a common sized catheter seemed to have reached the bladder, but gave vent to blood only. Not having a prostatic catheter with me, and urgent engagements calling me elsewhere, I was obliged to defer farther attempts till the evening, when I completely failed to empty the bladder. As it was now late, and the patient was a little way out of town, it was agreed that I should return at six in the morning, and, if possible, reach the bladder by incision. I took Dr. Buchanan with me, who tried the prostatic and his compound catheter without success. I immediately performed the operation as above described, and with the utmost ease, and by the simplest possible operation, drew off a large quantity of bloody urine. The relief was great, but only temporary; the old gentleman sank, and died in about twenty-four hours.

Want of success, in this case, does not militate against the operation. Every thing was against it—the great age of the patient, the previous repeated attempts to introduce catheters, the loss of blood from the urethra and prostate, and exhaustion, made recovery all but impossible. In similar cases, let careful, but not too frequent, attempts be made to pass the prostatic catheter, and if these fail, let the urethra be opened *at once* in the manner recommended, and I have no fear of the result.—*Glasgow Medical Journal.*

Surgical Removal of Opacities from the Cornea.—M. Szokalski contributes to the *Revue Médico-Chirurgicale* a *compte-rendu* of thirty-two cases in which he has practised this operation. He performs it by scraping the cornea with a delicate knife, as we scrape paper to remove ink marks from it. The epithelium of the cornea adheres pretty firmly in all cases, but, when opaque, is often so tough that it cannot be removed at one sitting. The proper substance of the cornea is still more difficult to remove; in fact, the author considers that, when it yielded to his mode of treatment, the success was owing, not to mere mechanical abrasion, but to the process of absorption set going by the irritation which the operation produces. This sounds like common sense, and at the same time goes far to invalidate M. Szokalski's own results, and to induce the prudent surgeon to trust to gentler means of stimulating the absorptive process. These we see wonderfully efficacious in cases of which we might at first despair. Much, however, as all practical oculists know, depends upon the age of the patient. In infants, we never despair, though the cornea be apparently quite opaque, so wonderful are the cures which nature sometimes effects; and M. Szokalski's neglect to notice the age of those on whom he operated, renders his results much less useful than otherwise they might have been.

Of the thirty-two eyes, the authors reckons fifteen successful, and eight partially successful operations. In five cases, there was no change effected, and in four the occurrence of inflammation rendered it necessary to stop the proceedings. Of the fifteen successful cases, there were eight in which the opacity was limited to the corneal epithelium, five in which it affected the superficial layers of the cornea proper, and three in which it was deeper still, as it was in all the eight partially successful cases. Thus, taking into consideration the remarks we have already made as to the spontaneous disappearance of opacities in young subjects, and our author's own admission as to the *modus operandi* of his process in the case of the deeper albugines, we do really think that the use of stimulating collyria, etc., and *time*, would have produced results as favorable as his. Again, he states that three of his total failures were cases in which the opacity was merely nebulous and superficial; and, above all, the *accidents graves* which happened in four cases, were of the most serious description. He states that, when inflammation does occur as a consequence of these proceedings, it always affects, not the conjunctiva, but the iris and other internal parts of the eye, and may terminate in complete destruction of the globe! Our conclusion is, that the operation is not to be recommended, *except* in occasional cases, where the opacity fails to yield to judicious treatment of the ordinary kind, continued for many months, where it is dense enough to render the eye useless, where the other eye is also blind, and where the formation of an artificial pupil is out of the question. One remark of the author we may quote—that his scraping process is much more likely to produce inflammation when carried on near the circumference of the cornea. This is so far fortunate, since it is precisely in that part that opacity of the cornea is of least consequence.—*Assoc. Med. Jour.*

Amaurosis from Suppressed Secretion.—M. Duval, in the *Gazette Médicale* for May, records several cases of amaurosis, following suppression of habitual perspiration from the feet, and evidently depending on congestion of some part of the organ of vision, so induced. The cure was effected by maintaining the warmth of the feet by various appropriate means, (among others, filling the stockings with flour of mustard and powdered sal ammoniac!) and by a course of alterative purgatives and mercurials.

DISEASES OF FEMALES.

The Use and Abuse of Potassa Fusa and Potassa Cum Calce in the treatment of Uterine Diseases. By HENRY BENNET, M.D.—More than nine years ago, Dr. Bennet first introduced potassa fusa and potassa cum calce as valuable agents in the treatment of uterine inflammation. They had since been used by many practitioners; but, he believed, not always with the caution which was imperatively required; and he was therefore anxious to lay down, even more carefully than before, the rules which ought to be attended to in resorting to so powerful an agent. He had obtained cylinders of potassa cum calce, in the proportion of two parts of potash to one of lime, which did not deliquesce, and were nearly as manageable as nitrate of silver, and therefore free from many of the objections urged against potassa fusa. The conditions of local uterine disease in which he considered that caustic potash, or the actual cautery was applicable, were the following: Chronic inflammation or inflammatory ulceration of the mucous membrane covering the cervix, or lining its cavity, intractable to other treatment; chronic inflammatory hypertrophy of the cervix, also intractable to other means; and lastly, chronic inflammation of the body of the uterus, in which form of disease the potash is merely applied to the cervix to produce a derivative issue, as we would apply an issue to the back in disease of the spine.

In the first class of cases, the caustic potash is used to modify the morbid vitality of the diseased tissues, and to substitute a healthy reparative action. In cases of hypertrophy, the elimination of a moderate sized eschar on the enlarged cervix is attended with acute congestion or inflammation of the subjacent hypertrophied tissues; and under its influence the latter soften and melt, as it were, or are absorbed. The object was not to destroy the enlarged cervix, but to procure its absorption. When applied to the cervical canal, the caustic potash reached the mucous follicles concealed between the rugæ of the *arbor vitæ*, which are occasionally the seat of chronic inflammation, and resist every other means of treatment. Although caustic potash was one of the most valuable contributions ever made to uterine pathology, Dr. Bennet considered it an *ultima ratio*, a last resource, only to be employed when all other means of treatment, general and local, had failed. If used cautiously, there was no danger whatever incurred by the patient; but if incautiously or imprudently employed, serious results might follow. The inflammation produced in the cervix might pass to the uterus. The vagina had also been compromised by the extension of the caustic; and in several cases, the potash having been employed too freely to the cervical canal, the os or canal had been nearly obliterated by subsequent contraction and adhesion of its parietes. To prevent these accidents, he advised practitioners never to attempt to destroy the hypertrophied cervix, as had been proposed, but to be satisfied by producing the eliminatory inflammation already described, to use the potassa cum calce cylinders which do not deliquesce; and when the potassa is applied to the cervical canal, to apply it very gently, and to pass a bougie through the canal once or twice a week for six weeks. Dr. Bennet never resorted to this treatment in passive hypertrophy, either of the cervix or uterus, which he thought might be left to nature, time, and general treatment. It had been often stated that the use of caustic potash to the cervix left indurated cicatrices, which might impede subsequent labors. This was by no means the case. So far from producing induration, this mode of treatment removed it, and facilitated parturition. Indeed, he was becoming more and more convinced of the truth of a statement he had made many years ago, that rigidity of the os in labor was nearly always the result of previous inflammatory diseases.—*Lancet.*

Incision of the Cervix Uteri in certain cases of difficult labour.—A rigid condition of the os and cervix may prove so formidable an impediment to labour as to justify incisions. This occasionally happens when the parts are in a healthy state; but it occurs more frequently from the existence of malignant induration. Incisions may also be made with propriety when the os is undilated and it is necessary to apply the forceps, in consequence of the head of the fœtus being retained in a transverse position at the superior strait of the pelvis. In such circumstances it cannot affect by its pressure the natural dilation of the cervix. The two following cases (reported in the *Journal de Méd. et de Chir.* for March, 1854), which illustrate the advantages of incision of the cervix in each of the conditions referred to, occurred lately in the practice of M. P. Dubois, at the Hôpital de la Faculté.

Case 1.—On the 13th Feb., at 2 A.M., a woman at the full term of her pregnancy was taken with labour pains. On the 14th, at 2 P.M., dilation of the os was complete. She continued to suffer on the 15th; and on that day, at 10 A.M., M. Dubois found the cervix stretched, and an annular stricture causing an evident impediment to the spontaneous termination of labour. Two incisions were made in the opposite sides of this ring by means of a probe-pointed bistouri (*bistouri boutonné*), and shortly afterwards the child was expelled.

Case 2.—On the 17th Feb., a woman with a deformed pelvis could not bring forth in consequence of the head of the fœtus occupying a transverse position at the superior strait of the pelvis. Death of the fœtus being imminent, M. Dubois incised the cervix right and left, and being thus enabled to apply the forceps, extracted a child, which was well formed and full of vigour.

In incising the cervix, it is perhaps safer to operate with blunt-pointed scissors guided upon the finger, than with the probe-pointed bistouri; but if care be taken, either instrument may be used. It is important to remember, as was above remarked, that the incisions ought to be made in a lateral direction. In this way the bladder and rectum are not placed in jeopardy of being injured by an extension of the incisions, incident to tearing during the expulsion of the fœtus. When the womb is affected with cancer, there is always some danger of the incisions of the neck being extended by a rending process into the body of the organ; and therefore in such cases special caution is required.—*Lancet.*

THERAPEUTICS.

Chloroform Vapor in Tenesmus.—Ehrenreich relieves the tenesmus of dysentery by the vapor of chloroform passed into the bowel through a syringe and common canula.

Belladonna in Salivation.—Erpenbeck used the extract of belladonna gr. ij ss. in an emulsion in 24 hours with perfect relief.

Sciatica.—Trousseau inserts a medicated pea over the nerve composed as follows: ext. opium and belladonna āā grs. xxxvi. pv. guiaic and mucilage q. s. for 20 pills. When these pills are dried and covered with fine powder of guiaic, they become as hard as wood.

Glycerine in Dandriff.—Mr. Shaw of Middlesex Hospital, uses glycerine in ptyriasis of the scalp, in the form of an oil mixed with an agreeable perfume.

New Salt of Quinine.—Bartella, an Italian physician, speaks highly of the sulpho-tartrate of quinine, which he obtains by combining equal parts of the sulphate of quinine and tartaric acid; it is much more active requiring but half the dose of the former.

Pitting in Small Pox.—Dr. Hughes Bennett recommends the frequent application of the following preparation to prevent pitting in small pox: carbonate of zinc, three parts; oxide of zinc, one part, rubbed with olive oil to a proper consistence.

Hæmorrhage in Carcinoma Uteri.—Remilly arrests the hæmorrhage by injecting every five minutes perchloride of iron 15 parts to 250 of water.

Turning.—Dr. Snow remarks, that nothing so much facilitates turning of the child, when the parts have become wedged as the inhalation of chloroform.

Quinine in Urticaria.—Mr. Startin gives quinine as follows: quin. disulph. gr. xij; ammon. sesquicarb. ʒ j; magnes. carbon. ℥ ss; aquæ ℥ viij; fiat mist. ℥ ss ter die sumend.

Nævus.—Dr. Cumming advises to apply a compound of 15 grains of tartar emetic to ʒ i of galbanum plaster on a piece of thin leather, cut accurately to the size of the tumor. Inflammatory action is set up and the vessels obliterated.

Phthisis, Diarrhœa of. Dr. T. Thompson.—Give five grains of trisnitrate of bismuth combined with three grains of gum arabic, and two of magnesia, every four or six hours.

Night perspirations of.—Give four grains of oxide of zinc, and four grains af extract of hyosciamus, made into two pills, every night for a time.

Compression of Arteries in Neuralgies.—Allier reports a case of long-standing neuralgia of the orbito-frontal nerve cured by compression of the carotid of the same side, made during the morning with short intervals every quarter of an hour.

Ulcer from Irritation of Nails.—Mr. Ure applies a hot saturated solution of alum continuously to the part. This induces rapid absorption of the thickened cuticle and prompt cicatrisation of the ulcerated surface.

PART FOURTH.

AMERICAN MEDICAL RETROSPECT.

PRACTICAL MEDICINE.

On the use of Opium and Astringents in Dysentery. By Prof. A. Flint, M.D.—*Opium.* From an early period in the history of medicine, opium has entered into the treatment of dysentery. It would be difficult to find any authority in the medical literature of past ages, for the disuse of opium in this disease. The only difference of opinion has related to the degree of reliance to be placed on it, and the liability to injurious effects if given largely. Medical opinions and practice, at the present moment, exhibit the same agreement and differences. Almost every practitioner prescribes opium, to a greater or less extent, in dysentery; some regard it as the chiefly important therapeutical agent in the treatment, and others look upon it as simply adjunctive. It is consequently employed much more freely by some practitioners than by others.

The immediate apparent effect of this remedy is often striking. Sometimes it appears promptly to arrest the disease. Instances of the latter description, however, are not sufficiently numerous to warrant the inference that the remedy has an efficacy which can properly be styled specific. We can readily account for more or less relief of the distressing symptoms of dysentery—the tormina and tenesmus—by the anodyne properties of opium. It is serviceable in another mode, in which, perhaps, consists its chief efficiency, viz., keeping the inflamed part in a state of quietude. It does this by arresting the peristaltic movements, and by relieving the tenesmus so that the patient does not feel impelled to make frequent efforts to evacuate the bowels. The remedy may exert a curative power in other modes which, with our present knowledge, are not understood.

To secure the ends just stated, opium must be given in doses sufficient to produce a decided impression. Experience teaches that the quantity requisite to produce the desired effect differs widely in different persons, and in different diseases, irrespective of pain. This is a very important practical point. A dose of opium which affects one person in a sensible manner, has little or no apparent effect on another person under similar circumstances; and in some diseases in which pain is not a prominent symptom, there is an extraordinary tolerance of this drug. The latter appears to be true of dysentery. Opium may be given, in some cases, at least, of this disease, in large doses without any manisfestations of its narcotic properties; and it *must* be given in large doses to secure the desired remedial effects. I have known twenty-four grains of the sulphate of morphia to be taken in twenty-four consecutive hours, by a patient not habituated to the use of opium, with no evidence of narcotism, nor could this quantity be diminished without marked aggravation of the symptoms.

Bearing in mind the differences in susceptibility to the remedy, it is of course highly important to avoid any risk of too great narcotic effect. This is to be done by increasing the doses, by degrees, up to the requisite amount, allowing intervals between them sufficient to estimate the effect of each dose.

Taking into view the *modus operandi* of opium (so far as it is explicable), we can understand why its good effects may be more marked, after free purgation. The intestine is more likely to remain in a quiescent state in proportion as it is free from fecal contents to excite peristaltic movements, and provoke acts of defecation.

The different preparations of opium may be employed according to circumstances. Those which are most prompt in their action are preferable, in order that the effects of each dose may be better estimated. Concentrated preparations are also frequently retained, when those more bulky are rejected by vomiting. The salts of morphia are particularly eligible in cases in which irritability of the stomach exists. Opium in tincture, or aqueous solution, and the salts of morphia, given by enema, often have a very happy effect. Frequently this mode of administration is ineffectual in consequence of the speedy expulsion of the enemas. This is very apt to occur in the course of the disease after their frequent repetition; and sometimes, under these circumstances, to persist in their use is injudicious, the irritability of the rectum being increased by them, and the efforts of defecation rendered more frequent and painful than would otherwise be the case.

Other injections are employed in dysentery. A strong solution of the nitrate of silver sometimes appears to allay the tenesmus, and render the dejections less frequent; in other cases it produces no such effects, and sometimes occasions severe pain. As a local application to the inflamed mucous surface, its action must of course be very limited, especially if the injection be made into the rectum alone. Carried higher up into the intestinal canal by means of a long tube, it may be brought into contact with a larger portion of the affected surface, but even by this mode its action must still be limited. I cannot speak of the latter mode from personal trial of it. Creasote, in mixture, appears, in some instances, to allay the irritability of the rectum. Strong testimony is borne, by numerous practitioners, to the relief afforded by large enemas of simple cold water, repeated more or less frequently.*

Astringents.—Various astringent medicines are in common use in dysentery, viz., the acetate of lead, the nitrate of silver; and, of vegetable astringents, a great number such as tannic acid, rhatany, kino, catechu, etc. These are very rarely, if ever, relied upon to the exclusion of other remedies, and they are usually given in connection with opium. It is, therefore, difficult to estimate the effect which belongs to them separately. The impression formed from my own experience is, that they are comparatively of small utility. It is desirable that the utility, or non-utility of this class of remedies should be determined, because, in the first place, if useful, it is important not to deprive ourselves of their aid; and, in the second place, if not useful, although directly they may not be injurious, they are likely to prove so, indirectly, by appropriating a certain portion of that dependence which otherwise we should place on remedies more efficient for good. —*Clinical Report.*

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* In a case, coming under observation since this was written, in which hemorrhage from the bowels occurred after the dysenteric symptoms had greatly diminished, enemas of cold water appeared to produce a decided effect in arresting the flow of blood. They were also grateful to the patient.

On Treatment of Rheumatism in New York Hospital. By J. B. Chapin, M.D. Resident Physician.—The plan of treatment usually pursued was: If the patient presented himself with unusual excitement of the skin and pulse, to administer a mixture of sulphate of magnesia and tartarized antimony until the skin was relaxed, and the pulse reduced to a more natural standard. The Rochelle salt was then directed in drachm doses, every two or three hours during the day time, till the urine was rendered alkaline, when it was gradually suspended. A lotion of carb. potass. ℥ j. with opium ʒ ij. to the pint of water, was directed as an external application. The administration of the salt was not attended with disagreeable consequences, with the exception occasionally of some ulceration about the fauces,—in no case was its action so severe upon the bowels as to require its entire suspension. The persons attacked were in the full vigor of health, and the character of the disease acute in its form. The frequency of administration of the remedy was governed very much by the reaction of the urine.

On the admission of the patient, the urine was tested, and, in all cases, was found to be of acid reaction, and the secretion of the skin presented the usual acid odor. The treatment was generally commenced the second or third day after admission, and the urine was rendered of decided alkaline reaction in an average of five days after its commencement; the longest period it resisted the alkaline reaction having been twenty days, and the shortest two. The secretions of the skin have not, I believe, been noticed to alter. In one case, attended with profuse perspiration, which yielded readily to treatment, the colored shirt the patient wore entirely lost its color; and it was suggested whether the same change did not take place in the perspiration as in the urine. The average amount of the salt administered was from five to seven ounces.

The average date of commencing improvement was seven days after commencement of treatment, coinciding, in the large majority of the cases, with the commencing alkalinity of the urine. The improvement was invariably permanent, and after the urine was rendered alkaline, *no new articulations were affected*, as a general rule.

The average period of convalescence was twelve days after admission, and the whole duration of the disease, including the period previous to admission, was twenty-two days. Of thirty cases treated by Dr. Swett, during April and May 1853, during which time no uniform course of treatment was pursued, the average duration was five and a half weeks. One of the most gratifying results of the alkaline treatment was the diminished frequency of cardiac complications. Twenty-one of the twenty-five were free from any complication, three were *admitted* with aortic obstruction, and one with mitral regurgitation. Not one patient was attacked with any heart complication during the treatment of the disease. Comparing this result with the practice last year, it was found that four had mitral regurgitation, six aortic complication, and three suffered from pericarditis; thirteen in all, out of thirty.—*N. Y. Med. Times.*

On Imaginary Diseases. By STEPHEN W. WILLIAMS, M.D.—Some of the most distressing complaints to which humanity is liable, are diseases of the imagination. They are a species of monomaniac insanity, frequently beyond the reach of medicine, and often beyond the acutest reasoning of the physician and the divine. They not unfrequently lead to the most depressing melancholy, to despair, and even to suicide. They also often lead to actual disease, particularly of the chylopoietic viscera. Imaginary hallucinations, however, sometimes lead to pleasurable sensations, as in the case of the man who fancied himself to be the Lord and Saviour of the world, who was tried before Lord Erskine. This phantom of the imagination must only be productive of pleasurable sensations, during its continuance. How many men have fancied themselves to be Presidents, Kings, and Emperors, Generals, and Commanders of armies, and have led their soldiers on to victory. But I will proceed to the relation of a few cases, which have fallen under my observation.

A patient called upon me a few years ago, who fancied that he had the venereal disease from cohabitation with a cow—he was a simple fellow, and was much alarmed about himself. The complaint had been upon him four or five years, or he fancied that it had. He called upon a noted empiric in a neighboring city. He saw him but a few minutes, and gave him some medicine, for which he charged him fifty dollars. He paid him nine dollars, all the money he had with him, and for more than three years he continually dunned him for the remainder, till he paid no attention to his letters, although he threatened to sue him. I had another patient in the same region, whom he treated in a like manner. I ascertained to my own satisfaction that the only actual disease he had upon him was occasioned by masturbation, though he fancied that he still labored under the venereal disease. I assured him that he was cured, but I never could make him believe it, and I was obliged to give him some little placebo or nostrum, to satisfy his mind. He called upon me once in about three months, for the space of five or six years. He died some time in the course of the year 1853, but, as he lived some distance from me, I did not see him in his last sickness, and do not know of what complaint he died, though, I believe, it was pneumonia. So far as my observation goes, the venereal disease has never been known to prevail among animals.

Shortly afterwards, I had another patient who fancied that she took the venereal disease twenty-two years ago, from washing the linen or making the beds of two young men, who she imagined had that complaint. It was never known that they had the disease; on the contrary, it was almost certain that they never had it. She never knew any thing about the venereal disease until six years afterwards, when she accidentally heard some old woman talk about that complaint, and afterwards she fancied that she took it six years before, in the manner described. The delusion lasted but a short time, and she married soon afterwards and had three children. The two youngest died either in the birth or soon after. Just before the birth of the last child, she fancied that she had the same complaint, but she said nothing to me about it. Her child died when two or three days old, and she mourned herself almost into a state of derangement, in consequence of it. She fell under the care of another physician, who, for a biliary derangement salivated her severely. She was then about 40 years of age. Some time afterwards she fancied that she was pregnant again, when, in fact, the irregularities of her menstrual flux were owing to the critical period of her life. Her old vagaries returned upon her, and she firmly believed that she had the venereal disease from the same cause. I could not reason her out of it, and as she had fretted herself into sickness, she persuaded me to put her upon a course of mercury, which I told her would probably cure her, as it was almost or quite, a specific. My principal object was to induce a new disease upon her, and turn her attention from the subject of her delusions. I also believed it would be of service to her on account of her biliary affections. I salivated her, and I thought I should hear no more about her old complaints. But they soon returned upon her imagination with violence. I knew that her delusions were in consequence of mental derangement, as her grandfather, mother, and sister had previously been afflicted with mania. She was willing to go to the Insane Hospital, and her husband soon after carried her there. She was benefited for a while, by her residence there, but soon after her return home she relapsed again, and again went to the hospital, and again regained her health, both mentally and bodily. She has now been with her family several years, without any return of her complaints.

A short time ago, I was called in haste to a young man not far from 22 years of age, who had partially castrated himself by removing one of his testicles with a razor. His intention was to remove both of them, but he bled so profusely that he was deterred by it. He lost an enormous quantity of blood, and I was obliged to tie the spermatic arteries as soon as possible, which I found very difficult to do, on account of the retraction of the cord. He had been troubled for more than a year with involuntary seminal emissions, which weakened him very much. He had a fever a little more than a year before, which left him quite debilitated, and he had not entirely recovered from it. He was told by one of his confidential companions, that he could never be cured of the complaint in any other way than by castration. He was also told of a young man in a neighboring town, who was afflicted in the same way, and that he performed the operation of castration upon himself, and was cured by it. This was the cause of this young man's resorting to this fool-hardy and dangerous act.—*N. J. Med. Reporter.*

Conclusions regarding Yellow Fever, deduced from the Epidemic of 1853. By Prof. J. L. Riddell M.D.—1st. That our Yellow Fever of 1853 has not been personally contagious; that the poison, virus or material cause producing it, does not emanate in an active condition from the person of the patient laboring under the disease.

2d. That the disease has been marked by characters of infection and infectious communicability, the poisonous matter (doubtless some species of living organism) maturing its germ or spores on the surface of solids devoid of life, surrounded by confined or impure air; which germs become diffused in the impure atmosphere.

3d. Three peculiar conditions seem to favor the development of the infection. 1st. The absence of ozone, the great chemical promoter of oxidation, which absence permits the undue development of obscure cryptogamic life. 2d. Abundant emanations from decomposing and disintegrating organized matters, complex products, gaseous, liquid, and solid, the papulum or blastema of cryptogamic growths. 3d. The presence of the specific organism, whose perfected spores constitute the material cause of Yellow Fever.

4th. That the towns and plantations of the Southwest have this year derived their Yellow Fever from New Orleans.

5th. That although black vomit fevers or types of yellow fevers may perhaps originate in this region, yet that the germs of our epidemic of 1853, have probably been derived from countries further South.

6th. That the mixture of equal parts by weight, of black oxide of manganese, sulphuric acid and water, which in the cold will continue for many days to develop ozone, promises to be the most convenient, most economical and most efficient disinfectant ever used; and therefore deserves hereafter a fair trial.

7th. It is proper and feasible for New Orleans to have some kind of quarantine in certain months of the year, which will exclude filthy persons, filthy clothing, and filthy ships, until they are fumigated; and goods from West Indian, South American and Mexican ports, until they are fumigated.

8th. The city should be kept cleaner than heretofore, by efficient drainage, and sanitary regulations carried into effect.

9th. Legal ordinances should be framed and carried into effect, to prevent the undue huddling together of human beings within the limits of the city.—*N. O. Med. and Surg. Journal.*

SURGERY.

New Mode of Treating Un-united Fractures of the Humerus. By Prof. F. H. Hamilton, M.D., of Buffalo.—It is the universal practice, so far as I know, in dressing fractures of the humerus, to place the forearm at right angles with the arm. Within a few days, and generally, I think, within a few hours, after the arm and forearm are placed in this position, a rigidity of the muscles and other structures has ensued, and to such a degree that if the splints and sling are completely removed, the elbow will remain flexed and firm; nor will it be easy to straighten it. A temporary false anchylosis has occurred, and instead of motion at the elbow joint, when the forearm is attempted to be straightened upon the arm, there is only motion at the seat of fracture. It will thus happen that every upward and downward movement of the forearm will inflict motion upon the fracture, and inasmuch as the elbow has become the pivot, the motion at the upper end of the lower fragment will be the greater in proportion to the distance of the fracture from the elbow joint. No doubt it is intended that the dressings shall prevent all motion of the forearm upon the arm; but I fear that they cannot always be made to do this. I believe it is never done when the dressing is made without angular splints, nor is it by any means certain that it will be accomplished when such splints are used. The weight of the forearm is such when placed at right angles with the arm, and encumbered with splints and bandages, that even when supported by a sling, it settles heavily forward, and compels the arm dressings to loosen themselves from the arm in front of the point of fracture, and to indent themselves in the skin and flesh behind. By these means the upper end of the lower fragment is tilted forward. If the forearm should continue to drag upon the sling, nothing but a permanent forward displacement would probably result. The bones might unite, yet with a deformity. But the weight of the forearm under these circumstances is not uniform, nor do I see how it can be made so. It is to the sling that we must trust mainly to accomplish this important indication. But you have all noticed that the tension or relaxation of the sling depends upon the attitude of the body, whether standing or sitting—upon the erection or inclination of the head—upon the motions of the shoulders, and in no inconsiderable degree upon the actions of respiration. Nor does the patient himself cease to add to these conditions by lifting the forearm with his opposite hand, whenever provoked to it by a sense of fatigue.

This difficulty of maintaining quiet apposition of the fragments while the arm is in this position, at whatever point the arm may be broken, become more and more serious as we depart from the elbow joint, and would be at its maximum at the extreme upper end of the humerus, were it not that here a mass of muscles, investing and adhering to the bone, in some measure obviates the difficulty. Its true maximum is therefore near the middle, where there is less muscular investment, and where, on the one hand, the fracture is sufficiently remote from the pivot or fulcrum to have the motion of the upper end of the lower fragment multiplied through a long arm, while on the other hand it is sufficiently near to the armpit and shoulder to prevent the upper portion of the splint and arm dressings from obtaining a secure grasp upon the lower end of the upper fragment. It must not be overlooked that the motion of which we speak belongs exclusively to the lower fragment, and that it is always in the same plane, forwards and backwards; but especially that it is not a motion upon the fracture as upon a pivot, but a motion of one fragment to and from its fellow. This circumstance I regard as important to a right appreciation of the difficulty. Motion, alone, I am fully convinced, does not so often prevent union as surgeons have generally believed. It is exceedingly rare to see a case of non-union of the clavicle. Of forty-seven cases of fracture of the clavicle which have come under my observation, and in by far the greater majority of which considerable overlapping and consequent deformity has resulted—of this number only one has resulted in non-union, and in this instance no treatment whatever was practiced, but from the time of the accident the patient continued to labor in the fields and hold the plough as if nothing had occurred. I have therefore seen no case of non-union of the clavicle where a surgeon has treated the accident. Indeed, what is most remarkable, its union is more speedy, usually than that of any other bone in the body, of the same size. Yet to prevent motion of the fragments in case of fractured clavicle with complete separation and displacement, except where the fracture is near one of the extremities of the bone, I have always found wholly impracticable. Whatever bandages or apparatus I have applied, I have still seen always that fragments would move freely upon each other at each act of inspiration and expiration, and at almost any motion of the head, body, or upper extremities. It is probable, gentlemen, that you have made the same observation. From this and many similar facts I have been led to suspect for a long time, that the motion has had less to do with non-union than was generally believed.

I find, however, no difficulty in reconciling this suspicion with my doctrine in reference to the case in question; and it is precisely because, as I have already explained, the motion in case of a fractured humerus, dressed in the usual manner is peculiar. In the fracture of the clavicle through its middle third, (its usual situation,) the motion is upon the point of fracture as upon a pivot; although, therefore the motion is almost incessant, it does not essentially, if at all, disturb the adhesive process. The same is true in nearly all other fractures. The fragments move only upon themselves, and not to and from each other. I know of no complete exception but in the case now under consideration. Aside of any speculation, the facts are easily verified by a personal examination of the patients during the first or second week of treatment, or at any time before union has occurred, both in fractures of the humerus and clavicle. The latter is always sufficiently exposed to permit you to see what occurs, and as soon as the swelling has a little subsided in the former case, you will have no difficulty in feeling the motion outside of the dressings, or, perhaps, in introducing the finger under the dressings, sufficiently far to reach the point of fracture. I believe you will not fail to recognize the difference in the motion between the two cases. Such, gentlemen, is the explanation which I offer for the relative frequency of this very serious accident—non-union of the humerus. I know of no other circumstance or condition in which this bone is peculiar, and which therefore might be invoked as an explanation. Overlapping of the bones, the reason assigned by some writers, is not sufficient, since it is not peculiar. The same occurs much oftener, and to a much greater extent, in fractures of the femur, and equally as often in fractures of the clavicle;

yet in neither case are these results so frequent. Nor can it be due to the action of the deltoid or of any other particular muscles about the arm, whether the fracture be below or above their insertions, since similar muscles, with similar attachments on the femur and on the clavicle, tending always powerfully to the separation of the fragments, occasioned only deformity, but not non-union.

If I am correct in my views, we shall be able sometimes to consummate union of a fractured humerus where it is delayed, by straightening the forearm upon the arm, and confining them to this position. A straight splint, extending from the top of the shoulder to the hand, made of some firm but moulding material, and made fast with rollers, will secure the requisite immobility to the fracture. The weight of the forearm and gland will only tend to keep the fragments in place, and if the splint and bandages are sufficiently tight, the motion occasioned by swinging the hand and forearm will be conveyed almost entirely to the shoulder joint. Very little motion, indeed, can in this posture be communicated to the fragments, and what little is thus communicated, is a motion which experience has elsewhere shown not disturbing or pernicious, but a motion only upon the ends of the fragments as upon a pivot.—*Buffalo Med. Jour.*

On Scirrhus, and Fungoid Affections of the Female Mamma. By Prof. J. P. Mettauer, M.D.—The recent report in regard to "the results of surgical operations in malignant diseases," of Dr. Gross, chairman of the committee appointed by the American Medical Association, to examine into and report upon that subject, does not accord with my experience in the treatment of those affections. I have extirpated 42 mammæ, 28 of them affected with scirrhus, and 14 with fungoid. Of the 28 cases of scirrhus, 15 were in a state of ulceration, and 13 without the slightest ulcer, or disposition to it. Of the 14 cases of fungoid, 8 had ulcerated, and 6 had not. Of the 42 cases, 28 were perfectly cured, and, at the date of this paper, continued well—more than three years now since the last one was operated on. Of the successful cases, 19 were scirrhus and 9 fungoid disease.

One of the cases alluded to, commenced as scirrhus, and finally, after three years continuance, ulcerated. When the patient came under my care, the ulcer had existed six months. I found the whole mamma implicated and somewhat enlarged, and three large axillary tumors, one about the size of an ordinary peach. The subject of this case was a negress about 47 years old, and when she was placed under my management, had become considerably emaciated. Her previous health had been very good. She had borne several children, but for 15 years had been sterile.

The mamma was naturally large, and although the ulcer was quite extensive, a sufficient flap on each side of the incision was preserved, and of healthy integuments, to cover the wound without much traction. The entire mamma, and the three axillary tumors were removed in the ordinary way, and without much difficulty. The wound was closed with sutures and adhesive plasters, as is common; and the water dressing, with a suitable bandage, was employed. The bowels were purged daily, until all danger of traumatic fever had passed. The case recovered rapidly; and in 14 days, the patient left the infirmary entirely well.

In the course of 10 months, this woman returned to the infirmary with a second tumor, in the exact situation of the first, and fully as large. It was in an ulcerating condition, and very much in all respects, of the same shape and appearance as the one upon which I had operated. There were also two tumors in the axilla, one fully as large as the largest of the first. Had I not removed, in the first operation, the entire mamma, it would have been difficult for me to be convinced that the present was not a disease of the mammary gland, so closely did it resemble the first tumor. The general health had become much impaired. There was considerable emaciation. This tumor was quite hard, but less so than the first. Its growth had been exceedingly rapid since it had attained the size of an egg. The disease reappeared along the line of union in five distinct places—and nearly at the same time—as small tubercles about the size of a large shot, unattended with pain, and were exclusively located in the cicatrix. As these tubercles enlarged, they amalgamated, involving the contiguous parts. The disease, as already stated, had existed 10 months, when the woman returned, yet the axillary swellings had only been perceived two months previous to that time.

These tumors were again extirpated, not, however, without considerable difficulty, especially those of the axilla, by reason of their close connection with the axillary vein and artery. They were removed, and the extensive wound resulting being managed as in the first instance, speedily healed up. In 18 days the cicatrix was perfectly formed.

For two months after the healing of the wound, every thing went on most favorably. The general health had greatly improved. At this time, three small tubercles made their appearance, at different regions of the cicatrix, resembling, from the description I received of them from an intelligent individual, the first that appeared. Without delay they were extirpated, and I took care to remove, with each one, a liberal portion of the surrounding structures. The wounds were closed in reference to union by adhesion, and a speedy cure. The water dressing was also employed, to prevent undue inflammation, and the bowels purged daily for three days, as auxiliary to that agency. In 12 days the wounds healed perfectly.

After this operation, the tubercles reappeared, and were extirpated six times,—the woman having submitted to *nine distinct operations*—two of which were exceedingly severe and painful. The ninth operation, however, seemed to remove the last vestiges of the disease; and the woman now, (seven years since,) is well and entirely free from any suspicion of a return. The disease, in its first appearance, undoubtedly was scirrho-cancer; but in its reappearance, it assumed a fungoid appearance; and such alteration I have thrice observed in cancer of the female breast. How far the want of the mammary gland may have influenced the disease, in reappearing, to assume the fungoid form instead of scirrhus, I am not prepared to state; but in the three instances in which it did put on that form, it succeeded the removal of the mamma for scirrhus.

This case is interesting in several aspects. It certainly was interesting to the patient and surgeon, as it caused the woman great suffering, and the surgeon not a little trouble. But its chief interest relates to the precedent it furnishes, in deciding upon, or rejecting operative procedure, in cancer and fungoid diseases of the female breast. Had no operation been performed, this woman certainly would have died. If the reappearing tubercles had not been extirpated, there is not the slightest reason to doubt that they would have resulted in tumors of the nature of those operated on; as they were of the same form and appearance, and originated in similar locations. The remarkable recovery in this case was due, evidently, to the frequent operations; and from repeating them when the tubercles were small, and before the surrounding textures became implicated. And, it is probable, if a like mode of operating were adopted in the treatment of scirrhus and fungoid, located in other organs of the body, they would more frequently be cured. I ascribe my success, in the treatment of these diseases, only in part, however, to the mode of operating described, in the case in question. An important item with me, in the management of such patients, is the constitutional treatment generally pursued with them, after recovering from the operation. And this treatment consists of aperients; the occasional employment of mercurials to improve the condition of the secretions generally, but more especially the biliary; the nitro-muriatic acid mixture; tonics, both mineral and vegetable; the cod-liver oil; in some cases iodine and mineral tonics; a well regulated diet; narcotics, if needed; and free exercise in the open air, if it will not expose patients to catarrhal affections, or to exhausting fatigue; and the treatment should be perseveringly continued. I believe that these discouraging and too often incurable diseases have often proved fatal, by reason of an unwillingness with surgeons to meddle with them, and a disposition to advise unfortunate patients against active surgical measures; when, if an early resort to extirpation had been proposed, and carried out in practice, many lives might have been saved. A refusal on the part of patients, too, to submit to the repetition of surgical operations in these cases, more especially if discouraged by friends, and not unfrequently by their medical advisers, also, has, in many instances, consigned individuals to the grave who could have been cured; and the case here referred to, is an instance in point. This woman was advised by her friends not to submit to a second operation; but I urged her to adopt the contrary course. She heeded my advice, and her life was saved. These tumors kill, generally, if left to themselves. By extirpating them early, before the constitution becomes recontaminated, and while the disease is, in a great degree, local, the only rational chance for a cure is afforded. My rule, now, is to operate in every instance, unless the disease is already manifesting itself as a pervading constitutional affection; or the patient is too feeble to sustain an operation; and, to repeat it as often as the disease reappears, as early as possible after its return; and to continue to do so until the fell disease is hunted down and eradicated from the system.—*Virginia Medical and Surgical Journal.*

Case of Osteo-Aneurism. Two Operations. Death. By Prof. P. F. Eve, M.D.—The patient was from Marshall County, this State; was a farmer, about 60 years old; who, a year before his application to me, had detected, while combing his hair, a tumor over the left parietal bone. When pressed for its cause, he had an indistinct recollection of a slight blow on that side of his head three months before its appearance, from the limb of a tree. But this was so slight, he merely mentioned it, knowing no other source to which to attribute its production. I think the aneurism probably had no connection with external violence, but arose from an intrinsic cause, disease in the vascular system of the bone affected. As the tumor increased in size, the patient began to be annoyed by a peculiar sensation in it, which led to the detection of its pulsation; he became too, a little deaf.

It was just twelve months after the aneurism was first observed, that the patient came to Nashville; having already consulted the profession pretty extensively, both personally and by letters. The tumor now measured fifteen inches in circumference; to protect it and somewhat restrain its growth, a leaden cap was worn, the edge of which, by pressure, had depressed the integuments all around it, and of course acted upon the occipital artery, and posterior branch of the temporal. There was distinct pulsation throughout the swelling, but it was not very forcible; and a vibratory thrill was noticed upon auscultation. Pressure upon the arteries of the scalp made no perceptible change in its circulation. The general health of the patient was good; he possessed a cheerful disposition, but was exceedingly anxious about his affection, and often expressed the opinion it would destroy life.

By arrangements, Mr. V. returned to the city after a brief visit home, and was subjected to the following operation on the 8th of November last. With a curved needle, ligatures were deposited under the courses of the posterior branch of the temporal and occipital arteries, and these were tied tightly over compresses—twelve long pins (not the common, but bought in Paris), were next thrust into different parts of the aneurism, with the design of coagulating its contents. The patient was placed upon a rigid diet; requested to keep quiet; to be freely purged with salts; and to have ice applied to the tumor. I have very little doubt, had this treatment been faithfully carried out, but that it would have been successful, so far as to have coagulated the blood, at least, a portion of it circulating in the aneurism. Unfortunately, it was just at that season of the year when ice could not be obtained, and the patient becoming restless, determined to return home, in spite of all entreaty to remain in Nashville. An impression was made upon the affection, I think, chiefly by the pins, though it still pulsated, but less distinctly; and with much reluctance, these were now all removed, with the two ligatures, at the end of three days, and this treatment entirely abandoned. Mr. V—— declaring he was peculiarly constituted in this respect, and home he would and must go.

On the 19th of the same month (Nov.), I again operated on our patient, now at his own residence. The two arteries of the scalp passing in the direction towards the aneurism, were exposed by incisions and ligated, but without making any impression upon its pulsation.

As it had once been punctured by the family physician, who was now present, and that without much hæmorrhage, an opening was cautiously made into the tumor, and the finger introduced came immediately in contact with large, loose spiculæ of bone, one compared even in width to the finger. To verify this unexpected condition in the case, Drs. Johnson and Kennedy, two excellent professional gentlemen, and who had seen most of it, were requested to examine this new feature in its diagnosis, and did so; though at the expense of some hæmorrhage, for the circulation in the part was exceedingly active. Finding it impossible to restrain the bleeding, which threatened to be fatal, by lint thrust into the aneurism, or by compresses upon it, four or five pins were passed through the edges of the divided scalp, and ligatures twisted around them. This, fortunately, promptly and permanently arrested it.

When the patient fully recovered from the effects of chloroform, he was made acquainted with the true nature of his affection, and apprised of the fact that death was almost certain in his case, either from hæmorrhage or inflammation of the brain. Morphine was given pretty freely immediately after the operation. On the second day he had some inflammatory reaction, which was relieved by purging with salts. On the third day he had very little fever, no delirium, but complained of some pain in his shoulders and arms. During the night of the fifth he became speechless, and died just as he was entering upon the seventh day from the operation. The dressing to the aneurism had not been disturbed, nor had the least hæmorrhage occurred. The patient very evidently died from inflammation of the brain, caused by the operation. No *post mortem* examination was permitted.—*Nashville Jour. of Med. and Surgery.*

Schirrhus Tumor of the left Tonsil. Removal. By Prof. EVE.—This production was congenital in a negro boy now aged eight years, and had acquired the size of a turkey's egg; it would have weighed several ounces.

The patient came from Hickman county; presented no symptoms of scrofula, but was apparently healthy, with the exception of a large sub-maxillary tumor on the left side. It was not attached to the skin, was firm and resisting, smooth on the surface with a slight depressing line running in its longitudinal direction. The tonsil on that side projected between the half arches, and the root of the tongue was also slightly inclined to the opposite side.

By careful incisions the facial vein was avoided, but the artery was necessarily divided, and the sub-maxillary gland included in the removal of the diseased mass. It was found not practicable to dissect this from the tonsil, and drawing it outwards and forwards, it was cut off from the attachment to this organ. After applying ligatures to three vessels, a sponge was made to fill up the space now left vacant. This was removed in twenty-eight hours, and by simple dressings, the parts have nearly healed up within three weeks, when the patient leaves the city to-day for home. I learn he has fully recovered.—*Ibid.*

EDITORIAL.

Progress of Cholera in New York.—In pursuing further the object contemplated in our last number—a general statement of some facts developed by the present epidemic of cholera in this city—we present our readers with a continuation of the tables of the comparative mortality of the epidemics of 1849 and 1854. One of the interesting facts which these tables show, and which must attract the attention of the most casual observer is, that the *periods of greatest intensity of both epidemics are consonant*, or in other words, that the disease, in each epidemic, arrived at its climax during the tenth week from its commencement. Now if we compare these tables with those published in our number for Nov. 1849, we find that in Philadelphia and Boston, the epidemic of 1849 was likewise ten weeks arriving at its *acme*. It would be interesting to follow out this point in reference to the epidemic at present prevailing in each of those cities, but as the material for such purpose is not at hand, we are prevented from doing so. That there is a fixed law governing the rise and progress and decline of cholera epidemics under all similar circumstances, is certain. In all the large cities and manufacturing districts of England, in the epidemic of 1848–9, this fact was strikingly illustrated, as will be seen by consulting the Report on cholera by the Royal College of Physicians of London.

But there is another fact developed from these tables, which is worthy of the attention of the reader. It is frequently asserted that during the prevalence of an epidemic, all diseases which are cognate, are swallowed up by it, or in other words, that while cholera prevails, all diarrhœas and dysenteries are prodromes of the disease, and should be considered as a portion of it—"that diarrhœa is cholera." We see no reason why such a belief should prevail. The tables show the usual mortality from bowel diseases, in addition to the choleric disease. In fact, they show more than the usual amount of deaths from diarrhœa and dysentery; and would lend color to a suspicion that we have prevailing in our midst at least two, if not three epidemics. That the characteristics of the diarrhœa of cholera are well marked, needs no argument to prove; no one who has observed an epidemic of cholera will have failed to notice that the stage of diarrhœa is as well marked, and as easily defined, as either of its other stages, and that in all its phases, it presents characteristics entirely distinct from the ordinary diarrhœa or dysentery, which now prevails coexistent with it.

The increase in the number of deaths, from the four bowel affections, noticed in the first table, has so to speak, further confirmation in the fact, that for several years past there has been a gradual increase in the mortality from diarrhœa, dysentery, cholera morbus, and cholera infantum, diseases, the sum of the mortality from which, is greatly augmented by the decided influx of immigrant population—a class peculiarly prone to these affections. That both cholera and the diseases just mentioned have not been particularly rebellious to treatment, will, we think, be readily acknowledged by all who have become practically acquainted with the present epidemic.

On referring to the following table it must be borne in mind that the epidemic of 1849 commenced during the week ending May 19, while that of the present, dates from the week ending June 3d, or three weeks later in the season.

1849.									1854.								
Week ending	Total Mortality.	Cholera.	Chol. Infantum.	Cholera Morbus.	Diarrhœa.	Dysentery.	Other Diseases of the Bowels.	Tot. from Chol. & Dis. of Bow'ls.	Week ending	Total Mortality.	Cholera.	Chol. Infantum.	Cholera Morbus.	Diarrhœa.	Dysentery.	Other Diseases of the Bowels.	Tot. from Chol. & Dis. of Bow'ls.
J'ne 16	425	145	5	13	4	1	15	183	July 1	517	78	29	13	23	10	5	158
" 23	473	152	10	10	10	3	16	211	" 8	761	98	74	11	34	20	10	247
" 30	734	286	34	15	17	18	19	389	" 15	817	147	117	17	41	29	7	358
July 7	702	317	31	10	25	25	7	415	" 22	915	183	145	21	47	36	10	442
" 14	991	489	64	18	55	44	15	680	" 29	1139	241	135	26	75	42	8	527
" 21	1409	714	102	34	61	71	29	1011	Aug. 5	1148	302	149	30	70	65	11	627
" 28	1352	692	108	24	49	79	18	970	" 12	1050	278	154	31	65	44	8	580
Aug. 4	1278	678	105	20	54	58	29	946	" 19	992	221	124	17	44	33	11	450
" 11	1011	423	86	19	64	68	23	683	" 26	832	130	126	14	55	44	5	374
Total	8375	3896	545	164	348	366	171	5488	Total	8171	1698	1063	180	484	323	75	3963

In order that our readers may become possessed of the facts which bear upon the diseases to which we have passingly alluded in the foregoing sketch, we present below a table which embraces the yearly mortality from the diseases mentioned, for a period of four years preceding each of the great epidemics of cholera. The per cent. of mortality can be easily computed if we bear in mind that in 1830, the population of this city was, according to the census returns, 202,589; in 1845 it was 371,223; and in 1850, it was 515,394.

	FIRST PERIOD.					SECOND PERIOD.					THIRD PERIOD.				
Disease.	1828	1829	1830	1831	1832	1845	1846	1847	1848	1849	1850	1851	1852	1853	1854
Cholera	----	----	----	----	3515	6	----	----	2	5071	57	----	374	33	
Diarrhœa	110	90	83	142	104	116	202	588	432	783	473	743	567	689	
Dysentery	155	126	128	183	136	201	284	657	739	1256	792	1193	774	763	
Cholera Morbus	19	14	10	28	93	19	34	44	43	241	44	102	238	72	
Chol. Infantum	167	119	168	172	334	563	527	692	505	926	713	721	915	922	

The remedial agents that have been most relied upon in hospital practice, consists of camphor, calomel, chloroform, and astringents, for arresting the discharges, after which stimulants, consisting of carbonate of ammonia, mustard, hot air bath, and brandy, as demanded by the exigencies of individual cases. The mortality has been greater, fifty per cent., owing to the impaired constitutions, and advanced stage of the disease, of the cases admitted.

Medical Schools--Session of 1854-5. The season approaches for the opening of the winter session of our Medical Colleges. To these Institutions, now numbering upwards of forty, each having its full complement of teachers, is entrusted the great interests of the profession in this country. They are to give the stamp to the future character which it will maintain whether high-toned, practical, and scientific, or mercenary, empirical, and superficial. Their responsibilities, therefore, are of no ordinary kind, and their claims to patronage should be thoroughly canvassed by every physician who has pupils in charge, to whom he acts as an adviser. Let him consider well the real advantages of the different schools for giving such instruction as he knows from experience they must need, with the qualifications of the various teachers to employ such advantages for the pupils greatest good.

We have frequently spoken of the advantages of New York for medical teaching, and deem it our duty to recur to them again in the annual announcement of the opening of our Medical Colleges.

The most important advantage which mere location can give one Medical school over another, is in respect to clinical teaching. The time is fast approaching when clinical teaching will be deemed an indispensable part of a thorough course of didactic instruction. A growing disposition manifests itself yearly among all ranks of students to obtain access to the wards of hospitals, and learn from actual experience, and apply at the bedside the lessons which they have but indifferently learned in the lecture room. And it is gratifying to witness this increasing estimation of clinical studies, for it is the only true method of graduating a clear-minded, practical class of physicians, who can safely go from the College halls into the active and responsible duties of their profession.

In this single respect, location gives to the Schools of New York, an advantage well worthy of consideration. The materials for clinical instructions at their command exist in the greatest abundance. The immense native and immigrant population that seeks medical advice and assistance at her public charities is without parallel. The following statistics gathered from the annual reports of the several Dispensaries exhibits the number of patients treated at these Institutions during the year 1853. City Dispensary, 46,338; Eastern, 23,114; Northern, 14,075; Demilt, 9,006; North Western, 4,948, total. 97,481. If we add to this number the patients treated at the different Hospitals, Asylums, etc., the aggregate will not fall below 150,000.

We are aware that this exhibition of figures has little significance, unless this wealth of material is rendered available to the student. Although there is not, we regret to say, in any of our Hospitals or Dispensaries a systematic and well regulated system of clinical instruction, yet no obstacles exist to prevent the student from accompanying the physician or surgeon in his daily rounds of duty, and examining for himself, and acquiring such hints, in regard to individual cases, as will be of infinite value to him in his future practice. These advantages, meagre it is true, when we consider the opportunities for rendering them serviceable to the student, are, nevertheless, highly appreciated by him, if we may judge by the eagerness with which he seeks daily the wards of the Hospital. We trust the day is not distant when the present artificial system of instruction will be broken up, and our Hospitals and Colleges will exist as single institutions.

The only changes in the Facultys of the different Schools of New York, as far as we are informed, occur in the *College of Physicians and Surgeons.* Owing to the continued illness of PROF. BARTLETT, the course on Materia Medica in this school will be delivered by PROF. SMITH. PROF. CLARK will unite the course on Practice to that on Pathology, and relinquish the course on Physiology to PROF. JOHN C. DALTON, JR. Dr. Dalton is an experienced lecturer, and successful experimental Physiologist, and this arrangement can but give entire satisfaction to the patrons of the school.

Of the different Medical Schools, whose announcements appear in our columns, the oldest is the *Medical Institution of Yale College.* Founded by one of the most eminent surgeons of this country, Dr. NATHAN SMITH, this College has maintained the very highest character for learning throughout its long career. Existing as the medical department of Yale College, and partaking largely of the literary and scientific character of the parent Institution, its graduates have been numerous and of the highest order of respectability, and have taken high rank in their profession.

Castleton, Vt., Medical College, was chartered in 1818. It has long held a high rank among country schools, and has always called together large and respectable classes. Its faculty for this long period, embraces the names of many of the most eminent men in the profession. In its recent changes, it has made valuable accessions. Two full courses of lectures are now given annually, of four months each.

The *Medical Department of the University of Buffalo* is a young but vigorous school, easy of access to students, and favorably situated in one of the most flourishing and enterprising towns on the western lakes. The College, a model building, is situated in close proximity to the Hospital of the Sisters of Charity, an institution accommodating about a hundred beds, and one of the most admirably conducted Hospitals in this country. The professors of Surgery and Medicine belong to the medical staff of this College, and clinical instruction is regularly given without interfering with the daily course of lectures. Possessed of such advantages with an able and accomplished faculty, the Buffalo School is destined to excel and rank among the very first schools in this country.

The *Geneva Medical College* is the revival of that old and popular school, whose discontinuance we noticed soon after the commencement of its last session. The faculty has been entirely re-modeled with a single exception. We hope their success in re-establishing this School will be equal to their efforts in so praiseworthy an undertaking, and that Geneva College, the worthy successor of the College of Physicians and Surgeons of Western New York, will again be the seat of sound medical learning.

We need not speak of the advantages of Philadelphia, for medical teaching. She has long had the monopoly of both medical teaching and medical publishing. We wish, however, to notice the changes which have lately been made in the *Pennsylvania Medical College.* The faculty of this school has recently undergone some important modifications which have resulted in the appointment of Alfred Stillé, M.D., to the chair of Practical Medicine, and John Neill, M.D., to the chair of Surgery. This is the third school in Philadelphia, as regards the number of students; but as respects the character of its faculty and facilities for instruction; it has no superior. The accession of Drs. Stillé and Neill to its faculty, the former Physician to St. Joseph's Hospital, and an accomplished scholar, and the latter Surgeon to the Pennsylvania Hospital, and well known to students by his text books, will give to this school great and deserved prominence.

The *Medical Department of the University of Nashville* is a Southern School, organized in 1850, and bids fair to become one of the most prominent schools in the South. From an able address delivered at the commencement of the term for 1852, by Prof. Bowling, we learn that its first session opened with the unusually large class of 121 students. In this introductory, Prof. Bowling presents the advantages of the Nashville School, and its claims upon the south in a strong light, but with satisfactory reasons. Its faculty embraces some of the most popular and honored names in the profession, and aided by the natural advantages of location, this school cannot fail to become one of the most important in the South.

For further information in regard to these schools, we refer to their several announcements.

Professor Paine.—We are happy to learn that Professor Martyn Paine, of the Medical Department of the New York University, has been elected a Corresponding Member of the *Gesellshaft für Natur und Heilkunde zu Dresden.* He is the first American upon whom the honor has been bestowed.

OBITUARY.

Death of Dr. W. J. Burnett.—Died in Boston, on the 1st of July, Waldo J. Burnett, M.D., aged 26 years, of phthisis. He was an eminent naturalist and a distinguished writer. In a future number we hope to give some interesting particulars of his short, but distinguished scientific career.

Death of Dr. I. Green.—Died at Cornwall, N. Y., on the 3d of July, Isaac Green, M.D., of this city, aged 38 years. He was a member of the surgical staff of Bellevue Hospital.

Death of Dr. J. Dennis.—Died at the State Emigrant Hospital, Ward's Island, New York, on the 13th of July, Joseph Dennis, M.D., one of the house physicians of said Hospital. He was a graduate of the College of Physicians and Surgeons of this city.

Death of Dr. Jose Vargas.—Died in this city, on the 13th of July, Dr. Jose Vargas, Ex-president of the Republic of Venezuela, aged 68 years. He held for some time the respective chairs of Professors of Anatomy, Surgery, Chemistry, and President of the University of Caraccas. He was also a distinguished author.

TO READERS AND CORRESPONDENTS.

Want of space in the editorial department of this number, compels us to announce in this place the fact that the New York Academy of Medicine offers a prize of one hundred dollars for the best essay on the Pathology and Treatment of Cholera Infantum. The regulations governing the competitors, are those usually offered in the bestowment of literary prizes. Also:—

That Dr. JOHN F. METCALFE of this city, has been elected to fill the vacancy in the Faculty of the Medical Department of the City of New York, occasioned by the death of Prof. J. A. Swett, M.D.

The following works have been received:—

Manual of Human Microscopical Anatomy. By A. KÖLLIKER, Professor of Anatomy and Physiology in Würzburg. Translated by GEORGE BUSK, F.R.S., and THOMAS HUXLEY, F.R.S. Edited, with Notes and Additions, by J. DA COSTA, M.D. Illustrated by three hundred and thirteen engravings on wood. Philadelphia: Lippincott, Grambo, & Co., 1854. 8vo. pp. 802. (From the Publishers).

The Principal Forms of the Skeleton and of the Teeth. By Professor R. OWEN, F.R.S., etc., Author of "Odontography," "Lectures on Comparative Anatomy," etc., etc. Philadelphia: Blanchard and Lea, 1854. 8vo. pp. 329. (From the Publishers.

The Principles of Animal and Vegetable Physiology: a popular Treatise on the Functions and Pneumonia of Organic Life. To which is prefixed a general view of the great departments of Human Knowledge. By J. STEVENSON BUSHNAN, M.D., Physician to the Metropolitan Free Hospital, etc., etc. With one hundred and two illustrations on wood. Philadelphia, Blanchard and Lea, 1854. 8vo. pp. 234. (From the Publishers).

On the Nature, Signs, and Treatment of Childbed Fevers; in a Series of Letters, Addressed to the Students of his Class. By CHARLES D. MEIGS, M.D., Professor of Midwifery and the Diseases of Women and Children, in Jefferson Medical College, Philadelphia, etc., etc. Philadelphia: Blanchard & Lea, 1854. 8vo. pp. 362. (From the Publishers).

A Systematic Treatise, Historical, Etiological, and Practical, on the Principal Diseases of the Interior Valley of North America, as they appear in the Caucassian, African, Indian, and Esquimaux Varieties of its Population. By DANIEL DRAKE, M.D. Edited by S. HANBURY SMITH, M.D., and FRANCIS G, SMITH, M.D. (*second series*). Philadelphia, Lippincott, Grambo, and Co., 1854. 8vo. pp. 985. (From the Publishers.)

Human Physiology: designed for Colleges and the higher classes in Schools, and for General Reading. By Worthington Hooker, M.D., Professor of Theory and Practice of Medicine in Yale College. Illustrated by nearly two hundred engravings. New York, Farmer, Brace, and Co., 1854. 12mo. pp. 389. (From the Publishers.

Common Sense, or the Mechanical Pathology and Treatment of Chronic diseases of the Male and Female Systems. By E. P. Banning, M.D. Fourteenth edition, Revised and enlarged, with 38 illustrations, together with two lectures by the Author. New York, Wilson and Co. 12mo. p. 341. (From the author.)

Transactions of the Medical Association of Southern Central New York, at the Annual Meeting held at Homer, June, 1854. Auburn, 1854. (From Caleb Green, M.D.)

On the Construction, Organization, and General Arrangements of Hospitals for the Insane. By Thomas S. Kirkbride, M.D., Physician to the Pennsylvania Hospital for the Insane. Philadelphia, Lindsay & Blackiston, 1854. 8vo. pp. 80. (From the Publishers.)

☞ We are in receipt of our usual exchange Journals.

☞ Communications intended for publication, and Books for Review, should be sent *free of expense,* directed to Drs. Purple and Smith, Editors of the New-York Journal of Medicine, 183 Hudson-street, *New York.* Persons at a distance may direct parcels, or exchanges, *paid* as above, under cover, to M. J. B. Baillière, Rue Hautefeuille, *Paris;* or H. Baillière, 219 Regent-street, *London;* or Lindsay & Blackiston, *Philadelphia;* or Wm. B. Ticknor & Co., *Boston.* The attention of Correspondents is respectfully requested to the above, as the Publishers are frequently subjected to unnecessary expense for postage and carriage.

All remittances of money and letters on the *business* of the Journal, should be directed to the Proprietors.

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THE NEW-YORK

JOURNAL OF MEDICINE

FOR NOVEMBER, 1854.

PART FIRST.

ORIGINAL COMMUNICATIONS.

ART. 1. *Operations on the Rectum and Anus for Malformations, Laceration of the Sphincter, Hypertrophy of the Sphincter from Spasmodic Action, Constriction, and Ulceration of the Rectum and Colon.* By W. PARKER, M.D., Professor of Surgery in the College of Physicians and Surgeons, New York.

CONGENITAL malformations of the rectum and anus claim the especial attention of the practitioner; 1st, because of their frequency; 2nd, the necessity of prompt interference; and 3d, the ill success of the various operations undertaken for their relief. Of the frequency with which these cases occur we have no accurate means of judging except from personal observation. It is sufficient, however, to know that they are liable to occur in the practice of any physician, and that they require early recognition and prompt attention. Not that the life of the patient is placed in immediate jeopardy if relief is not given at once, for it is a fact that the little sufferer will often live for weeks and indeed months without having the bowels evacuated by the natural channel. But such cases are exceptional and do not serve as guides in practice. The success of the various operations which have been undertaken for the cure of these malformations is truly discouraging. Amussat denies that they ever succeed, and it is well known that Mr. Brodie has refused to operate, preferring to leave the case to nature. Operative surgery, however, has been too successful in relieving other grave deformities of the body, to make us despair, or even doubt of its ultimate success in remedying these serious malformations.

These malformations consist of 1, *Closure of the anus* by a membrane resembling the external integument; the bowel terminating at the anus, and the septum being so thin that the fluid collected within protrudes whenever the child cries. These cases ordinarily require only a crucial incision and the removal of the corner of the flaps thus formed, and some care to keep the opening patulous by means of tents.

2. The anus may be *completely absent*, its place being occupied by a dense fibro-cellular structure, and the bowel terminating in a cul-de-sac above. This deformity is much more serious than the former. The operation usually performed for its relief consists in puncture with a trocar or bistoury and the subsequent introduction of tents. The most novel operation in these cases was recommended by Amussat, and by him first performed. It consisted in dissecting up this cul-de-sac, drawing it down and attaching its border to the external integument.

3. The anus may be *contracted* so as to allow of the escape of the meconium only in drops. This condition is relieved by slightly incising the contracted orifice, and afterwards dilating it with sponge tents. If it depends upon a partial septum stretched across the passage, this must be divided.

4. The anus may be perfectly well formed, and appear natural, but at a variable distance above its orifice, generally about one and a half inches, the bowel is by a firm septum stretched across its passage. These cases are liable to be overlooked owing to the normal appearance of the external parts. They are, however, easily diagnosticated, when the attention is called to them. By

passing a probe up the rectum, it meets the obstruction, and where the septum is thin, an impulse is given to it whenever the child cries. This malformation is relieved, like the former, by puncture or incision of the occluding membrane.

These are the more ordinary forms of malformation of the anus and rectum, and those to which I wish especially to direct attention. In common with others, I have performed the various operations above mentioned with the most indifferent success. In some cases, death followed from an unknown and inappreciable cause. Again, it was the result of purulent absorption, especially in those cases where it was necessary to penetrate deeply in order to reach the bowel; and finally, the mass of cases terminated fatally by closure of the artificial passage, the constant tendency of which to contract being the greatest obstacle to overcome.

I have recently, however, resorted to a simple expedient which has seemed to avail something in the ultimate success of the operation, and to which I wish to direct attention. It consists in introducing the finger forcibly into the artificial tract and thus dilating it freely, both at the time of the operation and subsequently at short intervals. In three cases treated in this manner within the last year or two, two recovered, and the third died from neglect. The following brief notes of cases treated by some of the different methods alluded to will serve to show the fatality of these various operations:

CASE 1.—I was called, on the 24th of February, 1840, to see an infant which was born on the 21st, at 8 A.M. The child had had no evacuation of its bowels, and an imperforate rectum was found to be the cause. The anus and sphincter were entirely natural, but, on introducing a probe, a septum was encountered about one and a fourth inches from the verge of the anus. An operation being decided upon, the trocar and canula were carried through the obstructing tissue, and on the withdrawal of the former, the meconium was freely discharged. A flexible catheter was introduced and an injection thrown freely into the bowel. The case progressed favorably until the seventh day when the child died from neglect.

CASE 2.—I saw a child on the 14th of March, 1841, which was born on the 12th, with an imperforate rectum, the closure being three-fourths of an inch from the anus. The bowels were very tumid. I introduced the trocar and canula and succeeded easily in giving free exit to the contents of the bowels. The child died, however, eighteen hours after the operation.

CASE 3.—This was a female child also having imperforate rectum and two days old when first seen, on the 16th of October 1841; it was suffering very much from the retention of the meconium. The septum was found to be one inch from the anus. I operated, as in the preceding cases, with the trocar, and had no difficulty in freely discharging the bowels. The same measures were also employed to keep the passage open, and with success; the child perfectly recovered.

CASE 4.—I was called on the 7th of December 1841, to see a fine male child, born on the 3d of the same month, who had passed nothing from its bowels. The rectum was found imperforate at the distance of half an inch from the anus. The abdomen was very much distended, and the child had suffered from convulsions during the previous twenty-four hours. I punctured with the trocar and succeeded in unloading the bowels freely. The child died on the following day.

CASE 5.—I saw this child 39 hours after birth. It had an imperforate rectum, the septum being one inch above the anus. The operation was performed as in the preceeding cases, the trocar penetrating to the depth of two inches from the verge of the anus, before it entered the bowel. The meconium was freely evacuated, and the urgent symptoms relieved, but the child died in nine hours after the operation.

CASE 6.—I was called to see an infant in Williamsburg, twenty-four hours old, which had an imperforate anus; there was no trace of an anus discoverable. When the child cried, I could detect with the finger a perceptible impulse communicated by the bowel to the intervening substance. I made an incision, and succeeded in penetrating the cul-de-sac at the depth of one and a half inches. On the introduction of the catheter the meconium flowed freely. The child died.

Case 7.—This child had an imperforate anus, for which an operation was performed on the fourth day, with entire relief. Four days later, it was found necessary to repeat the operation, as the artificial passage had been allowed to close. But it proved impossible to find the old passage, and accordingly a new one was made with the trocar. Not succeding however, in giving exit to any feculent matter, injections of warm water were used, and afterwards sweet oil, which escaped without any trace of fæces. A catheter was introduced, but with no better result. A small dose of calomel was ordered, and further attempts to reach the bowel delayed for several hours. Upon a second trial, the cul-de-sac, was reached without difficulty, and a free discharge from the bowels followed. The severe symptoms were relieved, the vomiting which had been troublesome subsided, and the case assumed a favorable appearance. A portion of flexible catheter was retained in the passage, and injections with warm water employed from time to time. The case progressed favorably after this operation and ultimately perfectly recovered.

Case 8.—I was called to see this child, when two days old; it had passed nothing from its bowels, the abdomen was greatly distended, there had been efforts made to relieve it, but without success. The obstruction was about three-fourths of an inch from the anus. The operation was performed with the trocar, and the meconium freely discharged. Instead of withdrawing the canula and treating the case by the introduction of tents, as previously, I determined to dilate the passage freely by the introduction of the finger. To accomplish this, a knitting needle was passed through the canula as a guide to the opening in the bowel, and the canula being withdrawn, the little finger was carried forcibly along the needle to the bowel, thus freely dilating the passage. On removing the needle, a pledget of lint was introduced, and the physician in attendance advised to pass his finger daily the whole length of the passage. The case progressed very favorably for several weeks, but this precaution being finally omitted, the child died.

CASE 9.—I was called to see a female child twenty-four hours old, December 12th, 1853, which had an imperforate anus. It was small, but well formed, and apparently healthy. The operation consisted in passing the trocar up to the bowel and evacuating its contents, which was done without difficulty; it was completed, as in the former case, by introducing the little finger, and forcibly dilating the passage. This practice was continued from day to day, and thus the tendency to the contraction of the passage and its ultimate closure, was effectually prevented. The child recovered.

CASE 10.—This was a fine male child, which was brought to me on the second day after birth, with an imperforate rectum. I operated as in the two last mentioned cases by the introduction of the finger after the withdrawal of the instrument, and freely dilated the passage. As in the preceding cases, the patients were left in charge of others, to carry out the treatment, and the failure seemed due to neglect, I determined in this case to attend to it personally. The parents were therefore, directed to return with the child every two or three days. They did as directed with great punctuality, and the passage was frequently and thoroughly dilated, but without causing the child any inconvenience. This dilatation was continued several weeks, when, as the passage showed no tendency to contract abnormally, this practice was discontinued. The child continued to thrive finely, but died when about two years old, of croup.

CASE 10.—*Laceration of the Perineum and Sphincter Ani during Parturition—Cured by division of the Sphincter and subsequent closure of the Perineum by Sutures.*

I was called on the 24th of October, 1849, to see Mrs.

M——, who had recently been delivered of her first child. Her labor was terminated with instruments, and an extensive laceration of the perineum, involving the sphincter ani, followed their employment. I was called in consultation a day or two after her confinement, to relieve, if possible, by an operation, her unfortunate condition.

On examining the parts, I found the laceration very extensive, extending fairly through the sphincter ani, the edges being widely separated, and the torn ends of the muscle drawn upon either side toward the coccyx. The appearance of the wound resembled that which is produced on dividing the orbicularis oris, the edges of the wound being drawn widely and permanently asunder by the contraction of the muscle.

The appearance of the wound suggested the method of cure. It would be difficult to retain the approximated edges of the lacerated parts of the anus in apposition while the sphincter remained in its present condition, strongly retracting its lacerated edges towards the coccyx. I accordingly proposed to divide the sphincter subcutaneously, but thoroughly, on each side of the coccyx, and then, after trimming the edges of the perineal laceration, approximate the lips of the wound, and retain them by deep clamp or quill sutures. The operation was acceded to by the gentlemen in attendance, and I proceeded at once to operate.

The sphincter was thoroughly divided at the points above indicated, and the edges of the wound, paired, were easily approximated and retained by the quill suture. The bowels were confined by opiates for several days and finally moved with injections of sweet oil. Union readily took place, and the result was most satisfactory.

Remarks.—Rupture of the perineum has been justly considered one of the most serious accidents of parturition, so difficult have these wounds proved of cure. It has, indeed, been advised to leave them wholly to nature, as not susceptible of treatment. The success of the operation in the preceding case, one of the most formidable that can occur, demonstrates the fallacy of such an opinion. These lacerations of the perineum may vary from a simple rupture of the fourchette to a complete division of the vulvo-anal septum, involving the sphincter ani. This latter is far the most serious, as presenting the greatest obstacles to cure.

Two principal methods of cure have been proposed. The first is, to effect a reunion by rest and cleanliness, without the resort to surgical means; and the second, to promote union by surgical interference. Surgical and obstetrical writers seem to be about equally divided in the adoption of these methods. Among the French, Boyer and Duparcque favor the former, and Dubois and Roux the latter. Mr. Brown, in his recent work,* concludes in regard to the opinions of English writers :—"On the whole, the prevalent opinion in England appears to have been that, from the uncertain, and, most frequently, unsuccessful, results of the operations devised, and from the apparently insuperable difficulties to be contended with, it was better merely to aid the efforts of nature in narrowing the wound, and in lessening the evils attendant on it." The method of treatment by rest and cleanliness is generally all that is required when the laceration is slight, and it is adopted immediately after the accident has occurred. But in those severe cases, when from the use of the forceps, or mismanaged labor, the rent extends completely through the sphincter ani, the suture offers the only reliable means of cure.

The different forms of suture used have been, the interrupted, the twisted, and the quilled, and of these the latter is generally preferred. Mr. Higginbotham reports a case in the *Lancet*, vol. 2, 1849, in which the laceration extended through the sphincter ani; he used the interrupted suture in two places, and applied the nitrate of silver to the skin along the edge of the wound. "The wound united by the first intention; the eschar surrounding the laceration, made by the caustic, had the power of fixing the parts as if adhesive plaster had been applied." The operation was performed thirteen years before the date of the report, and during that time the patient had remained well, and borne nine children without any return of her trouble. Several cases have been reported cured with the hare-lip pins and twisted suture, but the quilled suture is much more frequently used at present than any other, and is decidedly preferable to those mentioned. In repeating this operation, however, I should prefer to use the clamp suture of Dr. Sims, of this city, which I believe would be admirably adapted to these cases, and for the introduction of which into surgical practice he is deserving of great credit.

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* *On Some of the Diseases of Women admitting of Surgical Treatment.* By ISAAC BARKER BROWN, F.R.C.S., Surgeon-Accoucheur to St. Mary's Hospital, etc., London: Churchill, 1854.

There was one step in this operation to which I would call particular attention, as contributing not a little to its success, viz., the complete division of the sphincter ani upon each side of the coccyx. By this simple measure, the tension was entirely taken from the posterior lips of the wound, which had previously been widely separated and drawn outward and backward, and the edges were in consequence readily approximated and easily retained in apposition. The necessity of this step to overcome the principal obstacle to the retention of the opposed surfaces in easy apposition, was impressed upon my mind while contemplating the appearance and anatomy of the parts engaged. The sphincter ani muscle having a strong and unyielding attachment to the coccyx, acted powerfully and constantly in separating its anterior lacerated portion, and, of course, in drawing asunder the rent in the perineum. The remedy for this difficulty very naturally suggested itself. By dividing the coccygeal attachments of this muscle its action would be destroyed and its power to prevent the perfect and undisturbed contact of the wound would be neutralized. The result of its division justified this conclusion, for not the slightest difficulty occurred in accomplishing this hitherto formidable task, and obtaining union throughout by the first intention. To relieve the strain upon the sutures, where the perineum is rigid and tense, Diffenbach made elliptical incisions upon each side of the median line; and recently, Mr. Hilton, of London, has, by subcutaneous incision, divided the coccygeal attachments of the sphincter and levatores ani muscles, for the purpose of changing the direction of their action from the coccyx towards the pubes.

At the time the above operation was performed in 1849, I was not aware that the division of the sphincter had ever been recommended, much less practised in these cases. It appears, however, according to Mr. Brown, that Saucerotte once operated in a similar manner, and Mr. Erichsen states (*Science and Art of Surgery*) that it was advised by Copeland, and approved by Bransby Cooper. Within the last year or two, Mr. Brown, of London, has operated in this manner very successfully, and in his work, above referred to, the different steps of the operation are finely and accurately illustrated by engravings. He is a warm advocate of the operation thus modified, and reports eighteen cases thus successfully treated.

It will be observed that my operation was by subcutaneous incision while that performed by Mr. Brown involves the external, as well as internal parts. In regard to the subcutaneous incision, he remarks [Page 41], "A subcutaneous incision of the sphincter has been suggested, but it will not furnish the results aimed at. The muscular fibres of the sphincter must be completely severed, and also the investing integument, to annihilate all traction." This objection is without foundation, as the puckered, folded integument of the anus, when once the sphincter is divided, is capable of indefinite extension, and exerts not the slightest traction upon the flaps of the wound. As to the results which subcutaneous incision furnish, we need but refer to the above case to prove that they are satisfactory.

CASE 11.—*Hypertrophy of the Sphincter Ani — Obstinate Constipation from its Spasmodic Action — Relieved by free Division.*

Mrs. C., an intellectual lady, aged 26, of a highly nervous temperament, and also imaginative, married about four years, but never pregnant, came under observation in 1852.

She had been a sufferer from her childhood, from a peculiar form of constipation, or rather a retention of the contents of the bowels from a peculiar cause. It seems that when about six years old she passed from her bowels some lumbricoides, the appearance of which, or the sensation which they produced, made a strong impression upon her mind. It happened subsequently that her imagination controlled the action of her bowels by inducing spasmodic action of the sphincter ani. She became so morbidly sensitive whenever her bowels were about to move, that under the impression that worms were about to pass from her, the sphincter would close firmly and entirely prevent the passage of fæces. In this manner a whole month often passed with repeated, but vain efforts to procure a dejection from the bowels. At every attempt, no sooner would she arrange herself for defecation, than the approach of the fæces to the rectum would induce a spasmodic and uncontrolable action of the sphincter and render all her efforts abortive. This state of things had continued for years, and was very perceptibly impairing her health. An actual movement of the bowels could be obtained only by the aid of active cathartics and it was then attended by the most intense suffering. She had resorted to various remedies, change of diet, etc., but with no benefit.

On examination, no disease of the anus or rectum, as fissures or ulcerations, could be detected on the most careful exploration; the only abnormal appearance was an enlargement of the sphincter muscle, which was in a truly hypertrophied condition, being markedly increased in bulk and strength. I directed her to restrict her diet to laxative food, such as rye, mush, wheaten grits, raw oysters, etc., and prescribed aperient medicines, and belladonna ointment to be applied to the anus. These measures, however, had no special or permanent benefit.

I then proposed the operation of dividing the sphincter muscle, which was submitted to, after a little hesitation. She was brought under the influence of an anæsthetic and the sphincter was divided freely upon both sides. Her nervous system was considerably excited by the anæsthetic, but she recovered from the operation with no unfavorable symptoms. The result of the operation was very satisfactory, as the morbid sensibility was almost entirely relieved, and the evacuation of the bowels rendered comparatively easy. She was seen recently and remarked that the operation had benefited her very much.

Remarks.—Spasmodic contraction of the sphincter ani is generally associated with, and dependent upon, ulcer or fissure of the anus. It may, however, exist independently of such causes, and is then dependent upon some other source of irritation, or upon a hysterical condition of system.

The preceding case is closly allied to the latter, though differing sufficiently to form a separate class of cases. The loss of consent and sympathy between the different muscles necessary to the expulsion of the fæces was, due to a purely mental cause, and not to a morbidly sensitive condition of the reflex spinal system. In the early history of the case, the action of the diaphragm and abdominal muscles was normal, the passage of the fæces along the bowel to the rectum produced no spasmodic action of the sphincter muscle, but when the expulsive act was about to be completed, the imagination became strongly excited, and the sphincter was closed involuntarily. This act was repeated from time to time, and finally became a fixed habit. The sphincter, in the meantime, by its unwonted action and powerful contraction, to resist the force of the abdominal muscles in effecting an evacuation of the contents of the bowels, of necessity gradually acquired bulk and strength, as in the case of any other muscle impelled to unusual exertion. Its action at length became purely spasmodic, being excited by the passage of fæces along the rectum, and the act of defecation could not be completed unless the intestines and abdominal muscles were stimulated to unwonted action by powerful cathartic medicines.

Spasmodic contraction of the sphincter ani, independently of any local disease, has been described by Boyer, Dupuytren, Mr. Brodie, and others. The former seems to have been the first to describe the disease and point out the proper method of treatment by division of the sphincter. In an article in the *Journal Complementaire*, t. 2, p. 24, *On some Diseases of the Anus*, he relates three cases which he treated in this manner with success. Dr. Bushe, of this city, in his work on the *Diseases of the Rectum and Anus*, also describes a form of spasmodic contraction of the sphincter, in which no local disease is discoverable, and which admits the passage of the finger without pain. Mr. Brodie speaks of it as a disease of not very uncommon occurrence, and remarks that "it is met with chiefly in women, especially those who are disposed to hysteria. It is, however, met with in other women, and sometimes in the male sex."—(*Lond. Med. Gaz.*, vol. 16, p. 26.)

Mr. Quain, however, in his recent work,* denies that spasmodic contraction of the sphincter ani ever occurs as an idiopathic disease, and states, that after an attentive examination of the cases reported as such by Boyer, he does not find any which confirms the opinion held by this surgeon. He regards them all as "examples, not of an idiopathic affection of the sphincters, but of disease of the mucous membrane, with sympathetic spasm of those muscles." It is true, as he remarks, that it is often very difficult to find the local ailment, and, therefore, it is liable to be overlooked; but in the present case there can be no doubt that the spasmodic affection of the sphincter was entirely independent of any local disease.

This hypertrophied state of the sphincter, dependent upon its spasmodic action, is an interesting fact. Brodie mentions it in his lectures, above referred to, as follows: "The contraction of the sphincter at first appears to be merely spasmodic, without any other change of its condition; but you know that, in proportion as muscles are called into greater action, so they become increased in bulk; and, in conformity with this general rule, when spasmodic contraction of the sphincter muscle has existed for a long time, the muscle becomes considerably larger than it was in its natural state, before the disease existed." In the present case it was largely developed.

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* *The Diseases of the Rectum.* By RICHARD QUAIN, F.R.S., London. 1854.

The only measure likely to relieve this complaint, is, obviously, division of the sphincter. This object the operation will certainly effect temporarily, and if it completely break up the habit, the relief will be permanent. The patient in the present instance was, at first, perfectly relieved by the operation, and though not entirely cured, still expresses herself greatly benefited. Her bowels now move regularly every day, with only an occasional Seidlitz powder.

CASE 13.—*Constriction of the Anus in an Adult, of many years duration—Relieved by Division of the Sphincter Muscle.*

Miss ——, aged 33, of Columbia Co., N. Y., consulted me for a complaint from which she had suffered fourteen years, and which she called "piles." The most prominent symptom was extreme costiveness, a passage from her bowels being obtained with great difficulty and severe pain, and only as the effect of active cathartic medicines. The difficulty was slowly progressing, and now rendered her life very miserable. She had been treated by many physicians, and used a great variety of remedies. She had never been examined, and was somewhat diffident when this measure was proposed as necessary to a complete understanding of her case.

She at length submitted, and, instead of hæmorrhoids, I found the anus nearly closed, the passage being not larger when forced than a common quill. There was no scirrhus, the stricture being due to simple contraction. She was informed that she could be benefited, and perhaps entirely cured, by an operation, and that medicines would be of no service whatever, in effecting a cure. She consented to the operation, after several days reflection. Ether was administered, and the sphincter divided deeply at three points. The usual dressings were applied—free hæmorrhage occurred, so as to require a tampon to restrain it—but the wounds cicatrized readily, and she was soon able to realize the benefit of the operation. For a considerable time the relief was complete, and she considered herself cured; latterly, however, the former symptoms have begun to recur, and it is probable that, eventually, another operation will be required.

Remarks.—Narrowing of the anus in the adult, uncomplicated with scirrhus, is a rare disease. It may occur as the result of operations for hæmorrhoids, or from ulcerations, located in its immediate vicinity. Mr. White describes a form of contraction, (*Obs. on Strictures of the Rectum,*) where it has resulted from the matter of syphilis and gonorrhœa; and Dr. Bushe also reports a case which was attributable to this cause. The narrowing or contraction of the anus in the present case was not traceable to any cause, but seemed due rather to a chronic thickening of the submucous tissue. Mr. Ashton* mentions having seen two cases of contraction of the anus by infiltration of lymph, but in both instances the complaint had been preceded by dysenteric symptoms.

The treatment usually followed in these cases, is gradual dilatation with bougies. This method of overcoming the difficulty, is very tedious and painful. I should much prefer free division of the sphincter, and subsequent dilatation with bougies if necessary, as being less painful and troublesome, and affording the fairest prospect of ultimate recovery.

CASE 14.—*Ulceration of the Rectum and Colon—Division of the Sphincter, Cured.*

I was consulted Oct. 20th, 1853, by Judge P. P., of New Orleans, for an affection of his bowels, from which he had suffered severely for a year or more. It appears that during the prevalence of the cholera in that city, he had been accustomed whenever his bowels showed any tendency to looseness, to take large doses of anodynes and astringents, and by this means confine them for several days. The consequence of this over-treatment, was a severe attack of dysentery. He recovered from the acute symptoms, but the ulcerations of the rectum and colon remained. For the relief of the distressing symptoms which they gave rise to, he had resorted to a great variety of treatment; and when he first consulted me in this city, he was on his return from Paris, where he had been under the care of different medical men of eminence, but without obtaining much relief.

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* *A Treatise on the Diseases, Injuries, and Malformations of the Rectum and Anus*, By T. J. ASHTON. London, 1854.

His symptoms at this time were of the most aggravated kind, being increased by his sea voyage; he was much emaciated; countenance anxious, mind gloomy and greatly depressed: pulse 120 per minute; skin hot and dry, passages from the bowels frequent, containing blood, mucus and pus, and accompanied with severe tenesmus; the whole tract of the colon very tender on pressure. On examining the rectum, the finger encountered a rough ulcerated surface, very painful and hot, and extending as far as it could reach. The nature of the difficulty was evidently ulcerations of the rectum and colon, from a previous attack of dysentery.

The treatment which I adopted was perfect rest in bed, anodynes to allay the irritability of the system, and a nitric acid issue, six inches long and two wide, along the course of the signoid flexure and descending colon. The effect of this treatment was soon manifest in a diminished action of the bowels, less tenesmus, composure of body and mind, and a general improvement in all the functions of the body. He steadily improved, and on the 25th of December left for the South, quite restored to health; although his trouble was not entirely removed.

On the 4th of June, 1854, he again came under my care, suffering from his former complaint, in, if possible a still more aggravated form. He had come from New Orleans by sea, and experiencing a rough passage, the severe and torturing symptoms of his disease had been increased, and the system reduced to a state that made him despair of recovery and threaten self-destruction to end his sufferings. The dejections from his bowels were now almost constant, attended with the most painful and harassing tenemus, a constant burning sensation in the rectum, and a consequent irritability of the system that admitted of neither refreshing sleep or rest.

I placed him under treatment, and in succession adopted such measures as seemed most suitable to his condition. Injections of nitrate of silver thrown high up, sulphate of zinc, etc., anodynes, and astringents with tonics, were variously administered, but with no benefit whatever. The weather now became hot and oppressive, his contemplated visit to Europe had to be given up, the passage having been already engaged, and there was great danger that his system would soon sink under the disease. The ulcerations were evidently extending, and more and more of the tract of the colon became daily involved; the pulse was 120 per minute, and often more; stools frequent and bloody; fever at night, and extreme restlessness.

As all the remedies had been faithfully tried which offered a chance of success, I now proposed to him an operation as the only measure likely to afford relief. He gave his consent without hesitation, and accordingly, on the 15th of July, I proceeded to divide the sphincter ani. He bore the operation well, and the relief was almost immediate. Pills of nux vomica and conium were given, and nourishing diet. The tenesmus and constant disposition to evacuate the bowels subsided, the irritability of the system diminished rapidly, and his progress towards recovery was uninterrupted. On the 6th of July he sailed for Europe, in a comfortable condition, and suffering from none of his previous symptoms. I have occasionally heard from him since and to the present time he remains well, with no tendency to a return of his former trouble.

Remarks.—The operation of dividing the sphincter in ulcer of the anus and rectum was first practised by Boyer, and with great success, in several cases which had resisted obstinately all local and general treatment. The correctness and necessity of this treatment are obvious; if rest is essential to the healing of an ulcerated surface, in no other way can it be more effectually secured in ulcer of the anus, than by destroying the action of the muscle upon which it is situated. The very existence of an ulcer at this point precludes all hope of a spontaneous cure. Rest is essential to the healing process, and yet the necessary irritation which the ulcer produces, induces a constant and painful action of the sphincter, entirely incompatible with cicatrization of the lesion of the mucous membrane.

Division of the sphincter where ulcerations of the rectum and colon co-exist, dependent upon a previous attack of dysentery, has not attracted much attention. And yet the same necessity for the operation exists in this as in the preceding instance. The constant irritation of the ulcers situated just within the anus keep up the most painful, spasmodic action of the sphincter, which compels the patient to strain almost constantly at stool, and these efforts still farther aggravate his condition by forcing along the bowel and over the irritable ulcerated surface, small quantities of fæcal matter, pus, and blood. It is evident that the sphincter plays a most important part in this morbid process, and should that muscle cease to act, it could not fail to follow that the bowel would be easily quieted, and the conditions necessary to the cure would be obtained.

Mr. Ashton, before referred to, seems to regard these cases as nearly hopeless. He remarks, "should ulceration attack many points of the intestine, and extend high up, the probability will be a fatal termination of the case, in spite of the most judicious measures we can employ." The success of the operation in the case above related, certainly one of the most aggravated kind, fully justified my expectations, and establishes the importance of such procedure, in similar cases. I had operated, in 1848, upon a female, from Mass. for ulcer of the rectum by division of the sphincter, with equally favorable results; and I was induced from my experience in that case, to resort to the same operation in this instance.

Art. II.—*Influence of the Poison of the Northern Rattlesnake—(Crotalus Durissus)—on Plants.*[*] By J. H. Salisbury, M. D.

It is a curious and well known fact, that some of our most deadly poisons are animal secretions, and that the very animals—the very tissues which secrete these powerful proximate organic principles, are as susceptible to their deleterious influence, when introduced into their circulation, as the tissues of the most harmless animal would be under similar circumstances. It is also well known that many vegetable products are highly poisonous to animals. But the influence of animal and vegetable poisons upon plants, has—although a subject scarcely less interesting in a physiological point of view—excited but little attention. The simplicity of the plant's structure, renders the field one of peculiar interest, in the way of studying the general action of medicinal agents and poisons upon organized tisues.

On the 18th of June, 1851, a large female rattlesnake, which had been caged in the N. Y. State Cabinet of Natural History, for about a year, without food, died. On dissection, its stomach and intestinal canal were found entirely empty. The sac into which the poison is emptied was laid open, and the virulent matter (of which there was little), carefully removed and placed in a porcelain capsule. About fifteen minutes after its removal, four young shoots of the lilac—*Syringa Vulgaris*, a small horse-chestnut of one year's growth—*Æsculus Hippocastamum*, a corn plant—*Zea Maize*, a sunflower plant—*Helianthus Annuus*, and a wild cucumber vine, were severally vaccinnated with it. The vaccination was performed by dipping the point of a pen-knife into the poisonous matter and then inserting it into the plant just beneath the inner bark. No visible effect, in either case, of the influence of the poison was perceptible till about sixty hours after it had been inserted. Soon after this the leaves above the wound, in each case, began to wilt. The bark in the vicinity of the incision exhibited scarcely a perceptible change; in fact it would have been difficult to have found the points, if they had not been marked when the poison was inserted. Ninety-six hours after the operation, nearly all the leaf-blades, in each of the plants, above the wounded part were wilted, and apparently quite dead. On the fifth day the petioles and bark above the incisions began to lose their freshness; and on the sixth, they were considerably withered. On the seventh day they appeared about as they did on the sixth. On the tenth, they began to show slight signs of recovery. On the fifteenth, new but sickly appearing leaves began to show themselves on the lilacs, and the other plants began to show slight signs of recovery in the same way. Neither of the plants were entirely deprived of life.

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[*] The principal facts in this article were formerly published in the Trans. of Amer. Scientif. Assoc., but as through this medium they have obtained a limited circulation, especially among medical men, I desire to bring them more directly before the profession by publication in a medical periodical.

It was interesting to mark the progressive influence of the poison. The first indication of the derangement of the healthy functions of the plants was observed in the leaves: these began to wilt and die at their edges and apices; and this death gradually and uniformly advanced on all sides towards the midrib and petiole, till the whole or nearly the entire leaf-blade was destroyed.

It is an interesting fact in physiology, that the plants first exhibited signs of death in the leaves; and still more interesting, that this death commenced first in the leaves, on the side of the plant, in which the poison was inserted[*]

The facts materially deducible from these experiments are:—

1. That the effects of the poison of the rattlesnake upon plants and animals, when introduced into their circulation, by a wound, are similar.[†]

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[*] This shows a less perfect system of Anastomosing vessels than exists in the animal.

[†] It is stated on good authority, that the poison of the snake can be taken into the stomach of the animal with impunity; its dangerous effects being only exhibited when introduced into the circulation by a wound. It would be interesting to note its influence on the animal when applied externally, to the skin, to see whether its deadly effects would be modified by the absorbents.

2. That it requires a much longer time for it to affect the plant, than the animal.*

3. That the effects were invariably exhibited on the parts above the wound, and in no case affected the leaves below it.†

4. That it invariably affected first the leaves on the side of the plant in which the incision was made.

5. That its influences were first rendered visible on the edges and apices of the leaf-blades.

ART. III.—*Reclamation on the Treatment of Ulcers by Anaplasty.*

BY JOHN WATSON. M.D., Surgeon to New York Hospital.

IN our current medical literature we occasionally meet with the announcement of surgical operations and of other performances, as novelties, which have no claim to be so considered. In some instances of this sort, I have seen friends and acquaintances unjustly overlooked; and in some, again, I have had reason to complain on my own account. Up to the present time, however, I have been willing to allow whatever little may have been added to the stock of surgical knowledge by myself to make its own way in the world, and pass for what it is worth, independent of the source whence it came. Nor should I on the present occasion deviate from this course, had I not in view the correction of an evil which appears to be on the increase.

The eagerness with which the busy practitioner is now and then solicited to write for the periodicals, and the little time he usually bestows upon his literary contributions, may offer some excuse for the unintentional oversights, or acts of injustice to which I now allude. But it should be remembered that the desire of being useful is not the only incentive to authorship; and that, among the rewards of the medical writer, not the least is the favorable notice of his labor by his professional brethren.

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* It should be stated, in order to show that animals were readily affected by the poison of the snake, that a short time previous to its death, a rat bitten by it died in two hours.

† This was probably owing to the small quantity of poison inserted in each case.

I would not do our critics and reporters the injustice to suppose that in any considerable number of instances, the oversights to which I allude, are intentional. Hasty composition and deficient information will explain the most of them. We are all, more or less, subject to forgetfulness. We receive impressions in reading or conversation, which, in due time, we turn to good account in practice; but, inattentive to the source from which they are derived, we may act upon, or write about them, as our own; place them, without suspicion of error, to our own credit; and lay claim to the results obtained from them as if they had been the original and spontaneous suggestions of our own minds. Now, this is among the evils at present existing under the sun; an evil, however, which by a little careful study, may easily be obviated.

And here permit me to say, that I have been more immediately led to these remarks by the perusal of an article in the last number of this Journal, entitled "*Elkoplasty*," or "*Old Ulcers Treated by Anaplasty*," from the pen of my worthy friend, Dr. F. H. Hamilton, of Buffalo; in which article Dr. H. reports the case of an ulcer on the leg, cured by an anaplastic operation which he performed in January last. In the same paper Dr. H. claims to have proposed this method of treating ulcers as long ago, as 1846; and to have at that date, in his clinic at Geneva Medical College, "anticipated most of the results" which he has "now actually obtained."

As an offset to these claims, it is but justice to say, that in his proposal, as well as in his results, Dr. H. has been anticipated, on at least two occasions, by myself, once in April, and once in July, 1844.

The first of these operations was for the cure of an old ulcer on the forehead, the result of syphilis, and complicated with necrosis and exfoliation of nearly the whole external table of the os frontis. A report of it appeared in the *American Journal of Medical Sciences,* for October, 1844, (page 537); and the details of it, under the head of "Melopoplasty, or Forehead-mending," were again published in the first volume, (page 711,) of Townsend's translation of Velpeau's Surgery; which appeared in this city, in 1845.

In this case, after vivifying the edges of the ulcer with the knife, and quickening its surface with a wash of concentrated aqua ammonia, I succeeded in covering the diseased surface by means of three large flaps; one of which was taken from the integuments of the temple on either side of the ulcer, and the other from the scalp above it. The recovery was rapid and complete. The patient afterwards officiated for some years as a nurse at the New York Hospital. The improvement in his appearance effected by the operation, was beyond all expectation. To the observer standing at a little distance from him, the lines of cicatrization on the forehead were barely visible; and his elevated and open countenance gave hardly any traces of its former loathesomeness and deformity.

Since this first operation, I have had but one occasion to recommend a repetition of it on the forehead. But in that instance, the patient died of an intercurrent and acute disease, before the operation was attempted. My second operation of the sort was for the cure of an ulcer on the foot. I cannot at present refer to any printed notice of it. But the case, at the time, was much talked about, at the Hospital and elsewhere, and has often been the theme of conversation since. I give the particulars of it from my own note-book. It is also recorded in the N. Y. Hospital Case-Books. (First Surgical Department, vol. 3., case 50, page 291.)

G. C., a young English seaman, was admitted by an order from the British Consul, in or about the year 1834, having by exposure to severe weather at sea, lost the greater portion of his left foot, and all beyond the tarsal bones of the other foot. The injury at the date of his admission, had been of several months' duration. The ulcerated surfaces left by the sloughs, had already partially cicatrized. But the loss of substance was so great that the patient could no longer use his feet in walking, and was obliged to move about upon his knees. After remaining for some months under treatment, the cicatrices becoming firm, he was supplied with an apparatus for each foot, somewhat after the manner of a Scarpaso shoe, having a firm wooden portion in front to supply the lost portion of the foot. By means of this apparatus, and subsequent modifications of it, which were the result of his own ingenuity, he was soon able to walk about upon his feet; and, being an active and intelligent man, he was appointed nurse in one of the surgical wards, in which capacity he still continues at the Hospital.

But, from time to time, the pressure of the shoes gave rise to much inconvenience, and occasionally to ulceration on the face of the stumps; obliging him at intervals to lay aside his shoes, and take to his knees again in walking. He had been for some months in this condition, in the early part of 1844. The principal uneasiness at that time was from a callous ulcer on the stump of the right foot. The annoyance from this was such as to compel him for a season, to remain in bed. After more than two months' confinement in this way, failing to effect a cure by milder means, I proposed to him an anaplastic operation. To this he readily consented, and it was accordingly performed on the 30th of July, 1844.

It consisted in carrying the point of a bistoury through the callous integument completely around the circumference of the sore, and at about the distance of a line from its outer border; in shaving off the surface of the sore, and quickening the whole of it, up to this line of circumvallation; in dissecting up a flap of integument from the top of the foot, and by the twisting and gliding process, bringing this down and securing it by sutures over the surface of the ulcer, so as to leave no raw surface exposed; and finally, in approximating the integuments at the gap, on the top of the foot, from which the flap had been taken.

The operation was a painful one, and gave rise to considerable inflammation. A narrow border of integument along the lower edge of the flap, sloughed away; and for a day or two the case seemed to threaten a disastrous result. But the inflammation subsiding, the reparative process soon followed; and, in less than three weeks from the day of the operation, the line of cicatrization was completed, and the ulcer closed. The patient, however, did not immediately afterwards resume the use of the shoes. But in the following November he was again about the house on his feet, and attending to his usual occupation. Since that period, his right foot has given him little or no uneasiness, but he has at times some trouble from tenderness in the other foot.

In connection with these cases, I might refer to several others of more or less importance, in which similar anaplastic measures have been adopted at the Hospital by my colleagues and myself, for the removal of deformities, the closing of fistulous ulcers, in the covering of ulcerated stumps. But proceedings of this sort are sufficiently common. They are to be looked upon only as special applications of the already well-established rules of anaplastic surgery; and in this light they have no claim to be spoken of as novelties.

The only marked differences of treatment between the case reported by Dr. Hamilton, and those spoken of above, so far at least as principles are involved, are that in his the flap was taken from the opposite limb, and in mine, from the immediate vicinity of the ulcer. He used the knife in quickening the ulcerated surface; whilst in one of my cases the knife was used, and in one, a wash of concentrated aqua ammonia. I do not see the force of the argument in favor of taking the flap from the opposite limb, so long, at least, as available integument can be procured near by. The difficulty of transplanting a flap from a remote point is hardly to be over estimated; and when from a different limb, the restraint to which the patient must be subjected during the process of adhesion is, to make the best of it, frightful; and never to be imposed upon any one, except under circumstances of the most urgent necessity.

But so far as the mere closing of simple ulcers is involved, thanks to the elasticity and yielding power of the skin, the anaplastic method is rarely necessary. In those of moderate size, and in some, too, of immense size, nature does the work of reparation with very little assistance, provided, always, that this little be judicious. And on those, again, of greater size, such for example, as result from extensive burns and scalds, or from diffuse gangrenous erysipelas, a flap of sufficient dimensions to cover them could hardly be removed with safety from any part of the body.

New York, October 9, 1854.

Art. IV.—*Suggestions relative to the Pathology and Treatment of Cholera.* By J. P Batchelder, M.D.

"I have read," says Dr. Davey, "and not without care and attention, the opinions and advice of many gentlemen in that Journal, (the London *Lancet*); but I have failed to detect any thing like a rational exposition of the nature of this calamitous visitation; and what is more, I have sought in vain for a philosophical—*i. e.*, a scientific plan of treatment which shall aid us to combat this oft-recurring epidemic—Cholera.

No two medical practitioners seem agreed as to either the proximate cause of this malady, or the indications of treatment to be kept in view. Whilst one advises mustard emetics, one acids, one alkalies, one opium, one calomel, one brandy, one astringents, as chalk, lead, etc., others, not the less zealous, and of equal practical acquaintance with the disease, will be found to recommend tincture of muriate of iron, croton oil, and so on, without end. If all this be true, and who can doubt it after reading our own and the other medical journals of this day ?—it must follow that our profession is somewhere at fault—that it has not yet assumed that deliberative tone, and those cautious and logical inquiries so indispensable to the right apprehension of a delicate and difficult subject, like the present one.

The succeeding remarks I am not without hope will, in some degree, facilitate a solution of the seemingly mysterious question—'What is cholera, and how is it to be treated?' In answer to these questions, we most respectfully propose to offer the following suggestions:—The very essence of this disease consists in a copious effusion of the more fluid or watery parts of the blood into the stomach and bowels, from which they are generally expelled by vomiting and purging—effects mainly imputable to two circumstances. 1. The want of accord between the physical properties of the effused fluid, and the sensibility of the membrane lining those viscera—deprived of its epithelium. 2. The mechanical distention occasioned by the quantity (usually very large) of the effusion within their cavities.

A sudden and violent contraction of the extreme vessels *(one more steady and less violent comprises the main predisposition)* forces the blood inward upon the internal organs, and causes their vessels to be abnormally distended, which excites them to contract. These vessels, contracting, move their contents in the direction in which they meet with the least resistance, and ultimately force them into the cavities of those organs. In this we have said cholera consists, and in this it differs from all other diseases. This, indeed, constitutes its specific character—logically speaking—its specific difference. The premonitory diarrhœa, although reckoned as one of the stages (diarrhœal) of the disease makes no part of cholera proper. It is only a predisposing cause—the most powerful and certain of all others, to usher in the disease.

If, just previous to the effusion, the vessels on the surface should relax, there would be a reflow of the fluids, and none of them would find their way into the intestinal canal. There might be chills and fever, but no cholera. Up to the period when effusion takes place, the analogy between cholera and intermittent fever, seems to be complete. The same cause which produces the one may produce the other, which explains the fact why intermittent fever so frequently precedes cholera. The cause which produces the difference between the two diseases we may not be able to point out; but we hope to be more successful in regard to the difference itself.

The effused fluid is neither a secretion, nor an excretion, but one of the constituents of the blood, which flows in a series of minute vessels, adapted and particularly appropriated to its circulation; its effusion, therefore, must be viewed somewhat in the light of an hæmorrhage, in which one of the constituents of the blood only is allowed to escape; but this, however, important as a practical suggestion, explains nothing. We are as much in the dark as ever, why one or all the constituents of the blood do not find their way into the stomach and bowels. Here analogy steps in to our relief.

The mucous membrane which lines the alimentary canal is, in its organization, analogous to the skin. It is, in fact, to the internal, what the skin is to the external surface of the body.

Now the skin is covered with a cuticle, which prevents the escape of certain fluids, and also precludes the absorption or admission into the body of certain agents which would prove not only detrimental but destructive in the highest degree.

Without this beneficient provision of nature, no one, even here in this highly-favored city, where we have a street-commissioner, health-wardens, and a *board* of health could live an hour.

For the further preservation of life, a similar provision in relation to the internal organs was necessary, and has been made.

The epithelium, or internal cuticle, is similarly constituted and arranged, and for precisely the same purposes—to permit the passage of certain secretions into the intestinal canal—to prevent the escape of the blood proper, or any of its constituents, as the serum, which circulates in the capillaries of the mucous membrane, and also to prevent the absorption, or admission of the noxious matters which abound in that canal.

The analogy relates thus far, to the structure and function of the parts in their normal condition. Let us extend it a little further—into the region of pathology.

If the cuticle be merely separated from the skin, an effusion of serum certainly follows, as in the case of a scald, a blister, erysipelas, bullæ, etc., an occurrence which we believe never happens without such a separation; and in cholera it is now a well established fact, that the discharges are mostly composed of serum—serum of the blood.

Reasoning from analogy, we infer that an extensive detachment of the epithelium or internal cuticle, has taken place in cholera, which constitutes the peculiarity or distinctive character of the disease;—that it is indeed its proximate cause, or the state which immediately precedes that which constitutes cholera. The microscope has indeed settled this question, for it has discovered in "the first excretions large quantities of epithelium in various stages of development, which was identical with that of the enteric mucous membrane."*

The removal of the epithelium from "the enteric mucous membrane," unstops the mouths of innumerable little vessels which open into the cavities of the stomach and bowels, and allows the serum of the blood to escape in ten thousand streams, which soon renders that fluid (the blood) incapable of sustaining the functions of life. Every organ is completely unstrung; hence the fearful, sudden, and almost certain fatality of the disease.

" * In all cases examined by the microscope, of the first excretions there were found large quantities of epithelium in various stages of development, and which was identical with that of the enteric mucous membrane;* but the stools which were examined during the latter premonitory, or collapsed stage contain-

* I have just been told by Dr. Budd, one of the intelligent physicians attached to the Franklin street hospital, that he had had the liquid found in the stomach and bowels (which were filled and distended to their utmost capacity with the rice-water discharge) examined microscopically, and that it contained a large quantity of epithelium. This patient had neither vomiting nor purging during the progress of the disease, yet all the other phenomena incident to it, were found most distinctly marked in all the organs.

Treatment.—When called to treat a dangerous disease, especially if epidemic, the first question the physician asks himself, is, what is its special mode of destroying life? In none is this inquiry of graver import than in cholera; and in few is it more easily answered, for nearly all its phenomena indicate that it causes death by exhaustion, technically—"death by anæmia;" if so, a single ounce of fluid lost or saved, may make all the difference between the recovery or death of the patient.

What then shall we first attempt to do? Stop the vomiting? No; but constringe and close the open mouths of the vessels which are pouring the fluids into the stomach and bowels.

FIRST INDICATION.

Stop the Effusion into the Intestinal Canal.—The acetate of lead is one of our most powerful styptics;* and has been more used, especially when combined with opium, in modern practice, for restraining internal hæmorrhages than any other medicine. The dose should be from two to six, or eight grains, according to the urgency of the case with one grain of opium; given immediately after every evacuation—especially if by vomiting. Everything depends on this mode of administering the remedy. Thus given, the stomach being empty it comes in contact with the vessels, and will remain long enough in that organ to have some, perhaps full effect. A single dose given early and in this way, has sometimes stopped the vomiting and

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ed, as might be expected, but little or no epithelium."—*Report on cholera as it appeared at Newcastle, on Tyne. By Drs. Pearse and Marston.*—From this we infer that, "during the latter premonitory stages," the cholera had not actually set in, for the epithelium had not made its appearance; and that, in the "collapsed stage," it (the epithelium) had been all separated and washed away, "as might be expected;" and from this it may be clearly inferred, that there is a difference between the premonitory diarrhœa and cholera, the former being the beneficient harbinger of the latter.

* A saturated solution of the acetate of lead, repeatedly injected into the nostrils is a very certain remedy for epistaxis; it will seldom if ever fail to arrest the hæmorrhage. It is almost equally efficacious in restraining the bleeding or oozing of blood from vessels too small for the ligature.

arrested the disease. This preparation appears to answer all the primary indications; the lead constringes the vessels, while the opium induces the external capillaries to relax, and lessens the sensibility of the internal; eases the pains, allays the cramps and spasms, and controls other inordinate actions; and all are acquainted with its efficacy (which is sometimes rather inconvenient) in suspending the secretions and peristaltic movements of the bowels. In some cases, the lead will not be retained a single minute; then, other stringents, as tannin, must be substituted. The trisnitrate (oxyde) of bismuth is an excellent remedy for staying the vomiting, especially when the matter vomited is blue or greenish. The acid character of the discharges suggested the use of this article. It may be combined with the bicarbonate of potash, which stimulates the kidneys. The trisnitrate, to be effectual, must be given in much larger doses than are generally prescribed. We are in the habit of ordering it in doses of half, two-thirds, or even a tea-spoonful, after each vomiting; and in common diarrhœas accompanied with acidity, the same doses every fourth or sixth hour. In these affections, if acidity be absent, it is of little use. It may be combined with opium, but does not, like the acetate of lead, counteract the narcotic effect of that drug. The diluted sulphuric acid has been much used as an astringent in various kinds of hæmorrhages and especially of late "at the Westminster Hospital in cases of choleraic purging." "Nor is this practice entirely empyrical, for, if this acid acts beneficially in hæmorrhage it may be supposed to act similarly in cholera, the serous discharge of which (to borrow an idea of Sir Henry Marsh) may be called '*a white blood* hæmorrhage.'" I have used it in no case of cholera; yet from the accounts given by several gentlemen of great respectability in the profession, I have formed a high opinion of its efficacy, and would try it without the least hesitancy, should the treatment herein recommended fail, or not agree. It ought to be given "in half-drachm doses, repeated at short intervals." Dr. Fuller says: "My own conviction is that in sulphuric acid we have an antidote—a specific—against choleraic diarrhœa," &c. Against this "choleraic diarrhœa," I want no better "specific" than the acetate of lead and opium, for, with the recumbent posture and perfect quietude, it will stop that "diarrhœa" in every instance—often a single dose will do it. The posture and quietude of which we have spoken is essential—sometimes the patient cannot raise his head or even his hand, without causing an effort to vomit or purge.

SECOND INDICATION.

Prevent the Determination of Fluids to the Internal Surfaces.—On account of the vomiting and constant copious flow of serum into the stomach and bowels, it is exceedingly difficult to stop the effusion by the use solely of of internal remedies; recourse must therefore be had to appliances which are calculated to counteract or prevent this inward movement of the fluids. Could this be accomplished, it would of itself answer our first indication. It may however, be effected in part by counter-irritants, as dry heat, dry cupping, etc.

Dry Heat is now more commonly employed in this affection than formerly, and as it induces the vessels on the surface to relax, is a proper remedial agent in this stage of the disease, if judiciously applied.

In times gone by, warmth was communicated by flannels wrung out in hot water, or by steam, raised by means of billets of wood, or hot bricks dipped in water, and laid by the side of the sick, under the bed-clothes, and persisted in until the poor patient was well nigh parboiled. We have some doubts as to this item (none in regard to this mode of practice) of treatment unless prescribed with caution. The warmth at first, should be very gentle, and increased as the patient becomes better pleased and reconciled to it. His body and limbs are icy cold—as if on the point of freezing—the contrast between present feelings and those excited by the application of even gentle warmth, are considerable and often distressing; hence cold is frequently more grateful than warmth. If a member were frozen or severely chilled, the intelligent physician would commence his treatment by applying snow or ice-water, and not warm or hot water. The algid stage of cholera should be regarded and treated somewhat in the same way—cold or cool water first—then warm, and subsequently dry heat. When a limb is much chilled or frozen, the vessels on the surface and perhaps through the whole member, are in a state of extreme contraction, and the object of making cold applications at first, is to prevent the too rapid relaxation and over-distention which an elevated temperature would certainly incite and induce, and which would be followed by inflammation and mortification; a result very sure to follow when frost-bitten parts are not judiciously treated.

Mutatis Mutandis.—The same holds with regard to the burning sensation at the pit of the stomach of which the patient so uniformly complains, and as uniformly calls for cold drinks to allay; but experience has fully proved that this sensation is more promptly and certainly removed by giving at first warm, and soon hot, and subsequently stimulating drinks.* The warm or rather *hot* drinks, are in the first instance disliked, and sometimes for a season refused, but, ere long, the patient will take them rather than not have any liquid, and beginning to experience the relief which they are calculated on true pathological principles to afford, soon gives them the preference. They should be given by the tea-spoonful in quick succession.

Dry Cupping is the most prompt and effectual method of making counter-irritation. It should be on an extensive scale. Instead of common cupping glasses, tumblers of a large size should be employed. They should be applied to the abdomen and also to other parts of the body, and allowed to remain until they fall off; indeed, several should be kept on all the while, or as much of the time as consists with the comfort and circumstances of each patient. These act not merely as external irritants, but for the time being hold the fluids as it were in their grasp and prevent their being turned inward, and ultimately discharged from the body; the application should therefore be as early made and as little interrupted as possible.

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* In 1832 the Thompsonians at first profited largely by this practice, but not having skill enough to treat their cases judiciously in other respects, they failed most signally. I do not know that they succeeded in curing a single patient.

In the second stage of the disease—we admit but two—the stage of contraction and of relaxation, (usually termed the stages of collapse and excitement) dry cupping may be improper.

The Application of Bands or Ligatures to the Limbs near the Body.—Thus applied, they obstruct the determination of a portion of the fluids to the internal organs, and effectually prevent the further contraction of the capillaries on the surface and in the limbs. They likewise co-operate with the cups in holding a considerable quantity of the fluids in reserve for the support of the vital powers and functions. They will often prevent an ague when applied in anticipation of its attacks; so will several tumblers, applied as cupping-glasses on each side the spine as soon as the patient begins to experience uneasy sensations in the back or loins, or an inclination to yawn.

Stimulating Applications.—As sinapisms, cayenne pepper, blisters, etc., the mustard plaster or poultice is very generally employed, but it is an inconvenient, filthy, unpleasant application—an abomination which seldom, if ever does much good. These appliances are most effectual when they follow the cupping-glasses, but should never interfere to prevent their use. After cupping, a blister is a valuable remedy. Applied to the back of the neck it is useful in preventing or lessening congestion or effusion about the brain, and upper part of the spinal marrow, and should therefore be seldom omitted.

THIRD INDICATION.

Stop Profuse Discharges from the Skin. — When the vomiting and purging have nearly or quite subsided, a cold clammy exudation from the surface commences.

As it respects manner, the internal and external exudations are analogous. In both, the capillaries contract, while the pores remain open, and allow the fluids to escape. To arrest this discharge from the skin, we have to deal with the capillaries themselves as well as with the pores. If, then, the physiological relation between these vessels and their pores or outlets be disturbed (as it is in the hot or cold fit of an ague) the effusion would in neither case happen. To stop this effusion, we must either make the cutaneous capillaries contract (as in the cold fit of an ague) so as to prevent their contents reaching the pores; or cause them, the capillaries, to become so over-distended (as in the hot fit,) that the pores will hold tight, and prevent the egress of those fluids. The first, the effect on the vessels, is produced by the firm application of a bandage to the limbs and trunk which compresses the capillaries, and is probably not without some effect on the pores. The second, the over-distension of the capillaries is accomplished by the application of powerful cups, as described in a former part of this paper. But for the fact that this transudation from the surface does not commence before the internal effusion has nearly or quite ceased, the bandage would be clearly contra-indicated. The bandage tends to stop the effusion; and at the same time forces the fluids inward for the use of the internal organs—the cups cause the capillaries to be over-distended, and so stop perspiration: hence we find the skin comparatively dry when they are removed, especially, if the effect has been powerful; and it remains in that state some time after their removal. The puking and purging may have ceased, yet this profuse out-pouring from the skin, drains the system and finishes what they had left undone; it must therefore, be regarded as a symptom of fearful import. Although not identical with the rice-water discharges, but somewhat analogous to the normal perspiration, it is, therefore, permitted to pass through the natural pores of the skin without requiring, as in the internal discharges, the separation of the cuticle. Whether this be so or not, the excessive discharge under existing circumstances, is adequate to the destruction of the patient. I have seen it so profuse, as to run in streams; stand in pools in the hollows about the neck, near the clavicles, and drench the patient's clothes and bed-clothes so as to make them wringing wet.

FOURTH INDICATION.

Support the Powers of Life.—Stimulants and cordials in the course of the disease are of immense value,—in most cases necessary—in some, absolutely indispensable.

I take the liberty to recommend a compound, which I have used with great satisfaction in a few cases, and which has been employed at my suggestion by a considerable number of professional friends, who have expressed themselves equally well satisfied with its effects. The following formula, according to my experience, is the best.

℞ . Chloroform,
Tinct. Opii,
Spts. Camp.,
Alcohol ā ā ʒij,
Ol. Cinnam., gtt. 8. M.

Dose, from 15 to 30 or 50 drops in a little brandy and water, every five, ten, or fifteen minutes. The frequency and quantity of the dose must depend on the urgency of the symptoms. This compound is very similar to that proposed by Dr. Hartshorne, a distinguished physician of Philadelphia, from whom the hint was taken. I know of no stimulant which is more efficient and grateful to patients—none which more uniformly relieves the sense of weakness and sinking at the epigastrium, which is so frequently experienced in this and most other diseases of exhaustion, as hæmorrhages, etc.

Second Stage, or Stage of Excitement.—The law of the system is, that contraction shall be followed by spontaneous relaxation, which is usually commensurate with the previous contraction.* Obedient to this law, the vessels on the surface do in some cases of cholera relax, and become filled with blood; when the flush appears and warmth returns. This is the stage of excitement, and hopes of recovery begin to be entertained, and are sometimes realized; but generally the unfortunate patient dies; and why? for two reasons:—1. When the reaction shall have occurred, there will not be blood enough remaining in the vital organs (the heart, lungs, and brain), to enable them to carry on the functions of life.

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* Owing to the frightful drainage of the system, this relaxation, even when it happens in cholera, is seldom in any just proportion to the previous contrac-

2. The separation of the serum of the blood from the crassamentum, particularly in the nervous centres, and its effusion into the cavities of the brain, cranium, and spinal canal.* Numerous dissections have most satisfactorily proved the reality of these results. They are, I conceive, quite characteristic of the disease, and serve to explain some of its symptoms:—for instance; may we not infer, that the cramps and spasms in the abdominal muscles and in the limbs are owing to the processes by which these changes are effected—especially in the spinal cord? After awhile, these cramps and spasms cease, because the changes in the spinal marrow, which induced them, have been accomplished—the serum has been separated and poured out, and there is little or nothing left in the capillaries of the cord to maintain the functions of animal life.

Notwithstanding the copiousness of this effusion, there are generally no signs of compression, either of the brain or spinal marrow. The symptoms present, evince feebleness of action in these organs, which has been induced on the

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tion, and, from the same cause, it does not in most cases take place at all, and the patients die, as they sometimes do, in the cold stage of intermittent fever.

* This separation and effusion seem to be a part, and parcel of the disease. They have been found in every *post mortem*, I have witnessed; and I am informed by the gentlemen having charge of the cholera-hospitals in this city, (whose experience in this matter is by no means small, and whose zeal cannot be too highly appreciated and commended), that they have made no autopsy in which these phenomena were not present. The effusion varies in quantity;—I have seen it amount to twelve or fourteen ounces.

one hand by emptying their capillaries, and on the other, by filling their veins (which have no valves) with grumous blood. These veins do not perform the function of the parts, but merely act in subserviency to the capillaries which circulate the colorless fluids, and actually do the work of these and of all other organs; but the grumous blood in the veins, unlike the colorless fluids in the capillaries is nearly, if not quite, unfit for any purpose.

The quantity of blood in the veins, and the effused serum in and about the brain and spinal marrow does not probably exceed the normal quantity of those fluids in these organs, but they are separated; and one, the serum, is out of place—extravasated; consequently neither answers the purposes it was designed to answer in the animal economy; these facts afford the reason why there is no compression. Now and then, it is true, a case presents with symptoms of apparent compression, a condition, owing to the vigorous contraction of the capillaries or substance of the brain, &c., which occasions a state somewhat analogous to that "induration of an organ which results from an *ex*pression of its fluid," and consequent gathering together of its constituents.* In consequence of this induration, there may be symptoms resembling those of compression; even convulsions, delirium, &c.

It has been supposed that, if a fluid suited to the demands of the system were injected into the blood-vessels, it might supply the place of that which had been lost, and help to recover the patient; but of this there is little probability; for how is the large quantity of effused fluid which so uniformly occupies the cavities of the arachnoid, of the brain, of the skull at its base, and the spinal canal to be removed? How is the thick, tarry, grumous blood which fills and distends the cerebral veins and vessels elsewhere to be refitted for circulation and use?

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* The *medulla spinalis* seems in some instances to be actually lessened in size, which accounts for the possible existence of the great quantity of fluid which we see now and then issuing from the spinal canal during an autopsy.

CONSECUTIVE FEVER.

The transition from the first to the second stage effected, cholera often assumes the form of fever,* which demands an appropriate treatment. Two indications seem to present:—

1. *To equalize the circulation.*
2. *Promote deficient secretions.*

If there be much determination to the brain, (or any other organ) the same course should be pursued as would be proper in analogous cases from other causes; cupping—wet or dry; perhaps a few leeches to the temples, or what is much better to the *septum narium*, cold applications, &c. Dry cupping has always seemed to have a good effect, and is attended with no risk whatever. To produce the full effect, the cups should be large and applied not to the organ itself, but in the vicinity. After the cupping or leeching, blisters may be, and generally speaking should be, applied. Laxatives may be proper; but purging is seldom if ever required. An active purge has not unfrequently turned the scale against the poor patient. An enema of salt and water, if large, will many times answer every purpose, and is much safer than even the laxative.

The James' powder, or pulv. antimonialis, either alone or combined with the Dover's powder, or calomel in small doses, should be given. With the former, in one or two grain doses, calomel acts as a sudorific. As there is a deficiency in the urinary secretion, diuretics may be very judiciously prescribed.

The cause now superadded to the two formerly mentioned (the congested state of the veins and the effusion of serum, in and about the brain and the spinal cord,) which renders the disease so apt to prove ultimately fatal, is the retention of urea in the blood. With a view to its elimination, colchicum in some form or other is a valuable remedy. The acetous extract, we think, the best. The well-known property of this article to promote the secretion of uric acid (which suggested its use in this affection), contributes, as far as it goes, to free the system of this noxious agent. Colchicum also acts as a diuretic, and combined with digitalis, also as an absorbent.

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* Respecting this consecutive fever, many medical men think, that opium should be used with great caution in the early stage, in which we have recommended it; but the symptoms, which have given rise to this caution, are produced by the disease, and not by that drug, for we have seen them in cases in which no opium had been given.

We should continually keep in mind the important fact, that, when the superficial vessels relax, and allow the blood to re-occupy them, (the system having been drained or excessively depleted), there may not be blood enough remaining in the vital organs to sustain their action; consequently it is necessary to restrain or repress entirely for a time this reflux, in order to prevent the extinction of life. Here the tight bandaging again comes into play—not to effect exactly the same purpose, but the same result, for which it was recommended in a former part of this paper. It should be applied to the limbs, from the extremities to the trunk.

Prevention.—Now the prevention of a disease has a direct reference to the predisposition; and also to the predisposing and exciting causes. It is believed that the specific cause of cholera is seldom, if ever, so intensified, as to produce the disease without the concurrence of the predisposition, and the application of an exciting cause. It is then clear if the predisposing and exciting causes be avoided, the disease will certainly be prevented. The causes of this predisposition are bad air, bad food, bad clothing; in general terms, bad living;—over-exertion, fatigue, want of sleep; previous sickness, especially if attended with copious discharges, as diarrhœa, hæmorrhage, &c.; depressing passions, as fear, anxiety, &c., intemperance; indeed, whatever materially interferes with the nutrition of the system. A mere glance at the effects of these causes is sufficient to satisfy any one of their ability and fitness to produce this predisposition; for all must have observed the paleness which follows even their brief application, and also the emaciation which is sure to succeed, when the application is more persistent. The more stringent the predisposing cause; or the more marked the predisposition, the less powerful need be the exciting cause which ushers in the disease: For instance, when the action of the external and internal vessels is nearly balanced, the predisposition may be said to have reached a point, at which only a very slight additional contraction of the former, or indeed relaxation of the latter, will disturb the equilibrium, and force the fluids inward upon the internal organs; but this will not produce the symptoms of cholera; for it occurs daily in intermittents and other febrile diseases without any such result; all, however, that is wanting to make out the malady, are the serous discharges. In chills and fever these discharges do not occur; in cholera, they do. The specific cause of cholera produces this difference.

PREMONITORY DIARRHŒA.—This premonition we deem of the utmost importance; for unless stopped (which is readily accomplished by the sugar of lead and opium with perfect quietude,) cholera is sure to follow. As stated, we do not consider it a part of the disease.

AUGUST 16th, 1854.

ART. V.—*Cheiloplastic Operation.* By MARK STEPHENSON, M.D., Surgeon to the New York Ophthalmic Hospital.—[With two Engravings.]

PLASTIC operations appear to have been first practiced upon the nose by the priests of India, in the early part of the 15th century; and what is a little remarkable, the process then devised and adopted, is the one (with various modifications) practiced at the present day, and is recognized by modern surgeons as the *Indian method;* which consists in obtaining the flap from some contiguous part, as the forehead, or the cheek.

About the middle of the same century, Tagliacotius, an Italian Surgeon, introduced another method of operating, which consisted in procuring integument, for repairing the breach from some distant part as the front of the arm or the back of the hand, and was then, as it still is, designated the *Tagliacotian* or *Italian method.*

We have thus seen that Rhinoplasty is of very ancient origin. Cheiloplasty, however, is of more modern date.

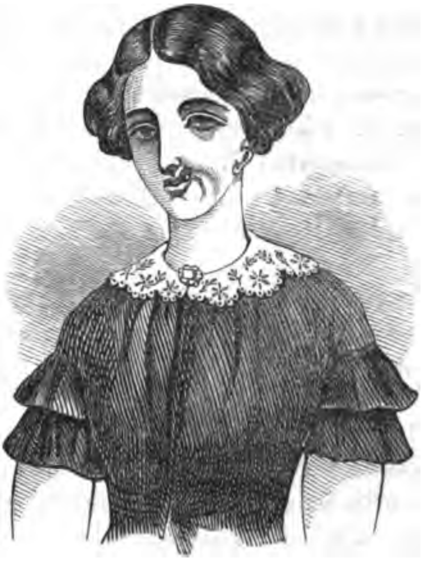
The two methods referred to, are applicable either to Rhinoplastic or Cheiloplastic operations.

The Indian method, is the one now more generally approved of, with various modifications; these are:—1. *Twisting* the flap upon its pedicle, and then dividing it, when the ingrafted surfaces are united. 2. *Rotating* the flap without dividing the pedicle. 3. Sliding and stretching the flap without either twisting or rotating it,—the latter is the favorite mode with French Surgeons, and has received the appellation of the "French process." Other modifications are occasionally practiced for the purpose of closing *fissures* in the hard palate;—or *fistulous* openings; the former by *reflecting* the flap, the latter by *rolling* it upon its cutaneous surfaces in such a manner as to answer the purpose of a plug, applicable to fistula after the operation of tracheotomy—the closure of an artificial anus, or the radical cure of hernia after an operation.

In the case about to be described, I adopted the sliding or French process:

B. A., 16 years of age, perfectly healthy, and with the exception of a deformity in the upper lip, a very interesting looking girl.—(Vide drawing No. 1. taken by an excellent artist before the operation.) Accidentally meeting with her at the house of a patient where I was visiting, I was struck with her distorted features, which gave her in some respects an appearance like a dog in the act of snarling.

I asked her if she would allow me to examine her lip; she willingly assented—after carefully exploring the cicatrix, I told her I thought the deformity in her face might be removed by an operation, if she would submit to it. Being just at that peculiar age when young ladies think much of their personal appearance, she immediately said she would willingly suffer the pain of an operation, if the deformity in her lip could be removed—would consult her parents, and if they gave their consent it should be done.



Accordingly in a few days, herself and father called at my office, and after some deliberate conversation upon the subject, they decided upon having it performed even at the risk of a failure, which I informed them might be the case, but in such an event the deformity would not be likely to be increased. In the history of the case, I learned that when a child, she had typhus fever in a very malignant form, and was very much prostrated with that disease; her lip sphacilated, and left her with this peculiar state of the parts. Whether mercurials had any agency in affecting it, I was unable to learn.

Operation.—In the month of April, 1850, with the aid and council of my esteemed friend, Dr. Alexander E. Hosack, I proceeded with the operation in the presence of Dr. Richard S. Seaman, of this city, the late and lamented Kingsley, Messrs. Tackaberry & Law—all at that time, students of medicine.

Before commencing the operation I traced the course of the incisions, to be made by dotted lines on the face.

The patient was now seated upon a chair of suitable elevation, with her head supported by Dr. H., who also compressed the facial arteries as they pass over the base of the jaw. The first step in the operation was to remove the old cicatrix, which left a large opening in the lip resembling in some measure an inverted V.

With a small scalpel, I next proceeded to make a new lip after the method of Mons. Serre, of Paris, in the following manner:—

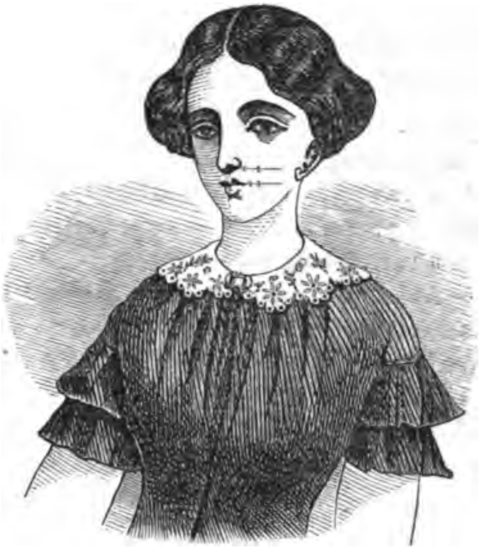
The first incision extended from the ala of the nose in a straight line to near the extremity of the lobe of the ear. Another one was made by commencing the incision at the labial commissure, and extending it to the same length, being parallel with the former.

The integument between the two incisions was then dissected up its entire length, using the greatest caution not to wound the duct of steno. This being done the long narrow flap, owing to its elasticity, admitted of its being drawn forward to the mesian line in the lip, where it was attached by two twisted sutures, one of which was near the vermillion border of the lip, the other near the root of the septum narium. Stitches were also put at the junction of the ala of the nose and flap; also at the angle of the mouth, and at four additional points along the line of incisions at suitable distances. Between these a long strip of adhesive plaster was applied extending from ear to ear, and over these layers of lint with a narrow roller over the whole. Directed an anodyne for the night, with wet lint over the dressings to keep them from becoming hard and stiff. Torsion was requisite to some of the divided arteries for the purpose of arresting the hæmorrhage.

Progress of Union.—The patient suffered some pain during the first twenty-four hours with constitutional disturbance;

was feverish and restless; but, owing to her vigorous and, healthy constitution the wounds healed by the first intention.

On the 4th day I was enabled to take out two of the stitches nearest the ear, on the succeeding day two more, and so on day after day, until all were removed.



Drawing No 2, gives a very good idea of her appearance a few weeks after the parts had united and the wounds healed. It also gives a correct delineation of the course of the incisions; and the black dots the points where the sutures were made.

The only difficulty which I had to contend with, was the constant tendency there was to adhesion between the flap and the gums. And notwithstanding I took the precaution to introduce pledgets of lint between the raw surface and the gums; yet I was not entirely successful in preventing their union. In other respects it exceeded my expectations and was truly gratifying to the patient and her friends.

Here again I must record my testimony in favor of the use of chloroform, which was given to her while in the erect position, being much more dangerous than that of the horizontal, the latter being impracticable in this case owing to the danger of strangulating the patient from the flow of blood into the mouth—it, however, was administered with great care and a due admixture of atmospheric air.

167 East 14th street, N. Y.

ART. VI.—*On the Employment of Sulphate of Quinine in Croup.* By E. MACFARLAN, M.D., of Williamsburg, New York.

IT may appear to some impossible that quinine can subdue inflammation of the larynx and trachea, but the following, cases which were successfully treated by this remedy, must at least make us pause and investigate, before pronouncing against such a valuable agent.

CASE 1.—About six months ago a medical friend, (Dr. Krackowitzer, of Williamsburg), asked me to assist him in the operation of tracheotomy. He stated that his patient, a little boy four years of age, was in the last stage of croup. He had exhausted medical treatment, including the local application of the nitrate of silver. I proposed, before operating, to try quinine, to which he assented. I would here remark that at this time I had not used this remedy in croup, but had determined to do so from observing its effects in other inflammations of the respiratory organs. Here, then, was a case, and a hopeless one. I called with my friend to see the child, and found the little sufferer just able to breathe, and every attempt to do so seemed as if it would be the last. We prescribed quiniæ grs. ij. every two hours. After the second dose, the mother told us, subsequently, that there was a manifest improvement, the skin became moist and cool; and after the third dose, the patient breathed better, and fell into a sleep, in which he remained for several hours, the child not having slept scarcely any for several nights previous.

I saw the patient next day, and it was exceedingly gratifying to find him breathing easy, and sitting up in bed, and disposed to be playful. On the fourth day I saw him flying a kite about the room. About one week from his recovery he had a second attack, which I think was occasioned by some imprudence on the part of his parents. Dr. K. again tried the quinine for a short time, but the symptoms of suffocation were so alarming that he resolved to abandon medicine, and resort to tracheotomy. The operation was skilfully performed by Dr. K., and the child lived about one month. Dr. K. made a post-mortem examination, and found at the internal orifice of the opening in the trachea a fungous body firmly attached, and large enough to interfere with respiration.

This case gave me great confidence in quinine, and although it was not so much affected by the quinine in the secondary attack, yet there was to my mind sufficient evidence of its power in croup shown on its first administration to warrant a second trial. I accordingly promised myself to use it in the next case that should present itself.

CASE 2.—On the 19th day of Sept. last, I was called in haste to see a sick child. On my arrival at the house, I found a little girl, aged about five years, sitting on her mother's knee; her face was red, skin burning hot, pulse full and bounding, loud sharp cough, respiration quick and difficult, and at every inspiration, the peculiar rasping sound so well known in croup could be distinctly heard; the child spoke in a hoarse whisper. The mother stated that the child had had an attack of croup about three years previously, and was very near dying. I gave the child immediately a full dose of ipecac. which produced free emesis, but had not the slightest effect in allaying the symptoms. Notwithstanding the high fever, I resolved to try quinine. I ordered a grain every hour, but the mother misunderstood me and gave it every half-hour, and a good mistake it proved to be, for on visiting the child about three hours and a half afterwards, I found a decided change for the better; the fever had very much abated; the skin was moist, and in fact the child was perspiring freely; the respiration had much improved, the child could also speak louder. I continued the medicine in grain doses every hour. I saw the patient again on the next morning about 9 o'clock, and found her sitting up, sewing baby rags. This was a marked case of inflammatory croup; there could be no mistake in the diagnosis; every symptom of the first stage was obvious, the loud cough, the pain in the throat, the hoarse voice, difficult and quick respiration, and the inflamed fauces and tonsils. After the 4th day I discontinued my visits.

CASE 3.—On the 27th of October, I was called to attend a child, aged about eight months. I found a hot and dry skin, respiration quick and difficult, and heard the unmistakeable rasping sound in the child's throat; cough frequent and ringing, fauces and tonsils red. I kept the child a whole day on ipecac. which caused free and frequent emesis, not the least impression was made on the disease—on the contrary, the child was rapidly getting worse. I resolved again to use quinine. I prescribed gr. ½ every half-hour. I visited the patient about 3 hours after the first dose, and discovered a great improvement. Saw the child next morning, and was delighted to find the respiration easy, cough slight, skin cool, and the child playful. The mother stated that the child slept well during the night, and perspired freely. The patient has continued well up to the present time.

In all my cases I use the quinine in solution, and, it will be observed, in full doses; by so doing, a quick and decided impression is made on the disease. I do not urge this mode of treatment as a hobby, but simply desire the profession to receive the statements herein made as facts; and I ask all to try the remedy, feeling (if given according to the method proposed) confident of its success.

CASE 4.—On Feb. 25, 1854, I was called to attend a boy, aged three years. His symptoms were as follows:—Hot and dry skin, full frequent pulse, quick and difficult respiration, loud sharp cough, and hoarseness of voice—so great, that the child was unable to speak above a whisper. The mother had vomited the child freely the night previous, but the child grew worse every hour, and on the morning following she became alarmed and sent for me. I at once prescribed quinine, gr. j. every half-hour. I saw the child three hours afterward, and found a slight improvement; saw him again four hours later, and found a very marked improvement, the skin was moist and the fever slight; the child was sleeping, and the mother stated that he had not slept so much for two days. On visiting the patient next morning, I found but little cough, skin cold, and respiration good; he was sitting up in bed playing with his toys. The boy has continued well from that time. I would here remark, that on the second day I continued the quinine every two hours, and on the third day every three hours, thus keeping up the influence of the quinine. After this I discontinued its use.

Remarks.—I know that many believe the nitrate of silver to be our sheet-anchor in croup; there are also many who consider large doses of calomel as almost a specific; but I would ask the advocates of each of these modes of treatment, how many consecutive cases they can show in their record-books of complete success? I will not presume to assert that quinine will always cure; nor will those who believe in nitrate of silver and calomel; but of the three modes of treatment I would rather take my chance with quinine. My objections to the nitrate of silver, are the extreme difficulty we meet with in getting children to open the mouth, and after we have succeeded in this, the struggles of the child are so great as to prevent the thorough application of the nitrate to the diseased part; and it is particularly difficult to pass the sponge through the rima glotidis. My objections to large doses of calomel are, that hypercatharsis may be induced, and, consequently, erethism of the mucous membrane of both small and large intestines—and, again, the useless and unpleasant results of ptyalism. But some will reply, large doses do not produce constitutional effects. I have met in the course of my practice a number of cases in which a single dose of ten grains have caused profuse ptyalism and ulceration of the mucous membrane of the mouth and fauces.

Now, quinine is a tonic, and in large doses, in inflammation, where there is much vascular excitement, (so far as my observation goes,) acts as a sedative. I conceive that this medicine acts primarily on the nervous system; it is thence reflected upon the vascular; the heart's action is diminished, and the febrile excitement subdued. If we make a tonic impression on the nervous system, then we have gained much, because the nerves of the capillaries being stimulated, act powerfully in inducing contractions of their walls; thereby the capillaries are enabled to contract upon their contents, and thus they are relieved of their distention.

In all the cases of croup I have had or seen under treatment, I have observed a strumous tendency. The first case mentioned in this report was well marked. I am of the opinion that in nine cases out of ten this peculiar condition of the system will be found. This, I believe, is another reason why quinine is beneficial in croup.

ART. VII.—*Report on the Progress of Epidemic Cholera, made to the Society of Statistical Medicine, New York, October,* 1854. By STEPHEN SMITH, M.D.

EARLY in the last year, it was announced that cholera had again sprung up in the East, and had begun its westward march, following very nearly the same route as in its two previous travels over the civilized world, and marking its pathway with the same remorseless and remediless destruction of human life. Judging from its past history, it was very naturally and correctly predicted that it would successively invade the states of Europe, commencing from the East, overrun Great Britain, and extend to the United States. Within a twelvemonth this prediction was fulfilled, and we now witness the close of a wide-spread epidemic of this much-dreaded pestilence.

In tracing the progress of the epidemic from its eastern origin to the western countries, it will be sufficient merely to indicate the date of its appearance at some of the principal cities, and such facts as may be gathered in regard to it in the different countries where it has prevailed. These facts are gleaned from medical periodicals, and therefore, while generally correct, they have not the authenticity of official reports.

The epidemic cholera of 1854 first appeared at Basorah, a town situated on the Tigris, and at the head of the Persian Gulf, in 1851. From this point it followed the course of the Tigris, and arrived at Bagdad early in 1852. Traversing Kurdistan, it spread over Azenbijan. The mortality at Tauris, the capital, was very great, it being estimated that 1000 persons perished daily. The epidemic continued to spread, and reached Tehran early in 1853, a city of 150,000 souls, of whom more than 15,000 died of this disease.

While the disease was thus invading successively the western cities and countries of Asia, it seems to have broken out in the heart of Europe, in Bohemia, where, during the year 1851, there were 58,121 cases and 23,225 deaths. From this province it traveled to Breslau, which suffered severely from August, 1851, to January, 1852. During the winter months the disease seems to have made little progress; but occasional outbreaks in the western provinces of Asia, and some of the eastern cities of Europe, proved too clearly that its march, though retarded by an unfavorable temperature, was still westward.

Early in the spring of 1852, on the 24th of May, while it was still spreading westward in Asia, the disease suddenly made its appearance in Poland, in the government of Warsaw, and district of Leeradz. It spread in every direction from this point, but without any order or apparent law of progress. In the government of Warsaw, there were 45,328 cases, and 20,906 deaths up to September 5th, 1852. In June, 1852, Kalisch, a town on the Prussian frontier, became a focus from which the disease spread to other Prussian towns, as Ostruvo, Pleschen, and Breslau, which had but just recovered from its previous attack. The disease now favored by the hot weather of summer, spread rapidly over Prussia.

It reached Dantzig, on the Baltic, Aug. 20th, and Nov. 12th, 1853; there had been 953 cases, and 611 deaths. It raged severely in some of the neighboring towns, as at Jungfer where one-eighteenth of the inhabitants were victims. In the government of Posen there were 19,612 cases, and 11,292 deaths. St. Petersburg was visited by the epidemic Oct. 1st, 1852, and to Dec. 1853; there had been 13,861 cases, and 5,609 deaths.

During the following winter, there was again a pause in the progress of cholera, but not an extinction of the disease. On the approach of the hot weather of the succeeding summer, it again commenced its westward march. It spread throughout many of the provinces of Russia, appearing as far north as Archangel, on the White Sea.

It reached Moscow on the south, in Aug. 1853, and traveling westward along the northern shore of the Gulf of Finland, it caused great mortality in the seaport towns.

At Helsingfors (population 19,000) 1,325 cases had occurred up to Aug. 31st, 1853, and 606 deaths. At Abo, still westward, (population 13,500) on Aug. 27th, 1853, there had been 1,027 cases, and 462 deaths; in the neighboring territory, there had been 226 cases, and 109 deaths.

Still farther westward, we find Copenhagen was attacked in July, giving on Sept. 20th, as the total of cases 7,515, and deaths 4,074, (population 125,000.) The principal cities of Sweden and Norway were visited soon after. It was officially announced at Stockholm about the middle of August; and vessels arriving from many of the Russian and Prussian ports were quarantined. The mortality in this city to Sept. 20th (population 90,000) was 1,995 in 3,378 cases. At Carlscrona, (population 12,000) there were 1,859 cases, and 1,006 deaths. Christiana, the capital of Norway, (population 21,000) lost 1,269 in 2,005 cases to the 10th Sept., when it ceased. It appeared at Hamburg on the 28th of July; at Rotterdam on the 23d of August, which had 617 deaths in 1,111 cases. It appeared at Antwerp, Sept. 12th, in a sailor, from Rotterdam, and prevailed to the end of October. At

Brussels, the first case occurred Sept. 14th, and one day later, Sept. 15th, it appeared at Havre, and attacked principally German emigrants from Rotterdam. Amsterdam suffered from the epidemic in November; on the 11th of the same month, it appeared in Paris, where it prevailed mildly during the remainder of the year.

The epidemic made its appearance in England about the 22d of August, 1853, at Liverpool, among German emigrants, just arrived from Hamburg. On the 31st of August, it broke out at Newcastle, and raged with great violence; during twenty-five days there was a mortality of 1,187 (population 65,000). The towns in the immediate neighborhood suffered attacks soon after, and the larger cities, as Manchester, Liverpool, and Sunderland, began to report the presence and progress of the epidemic. Towards the last of September, cases were reported in London, but the disease continued very mild till the 10th of October, when it began to put on more of an epidemic form. The epidemic appeared at Glasgow, Scotland, about the middle of December, and the number of deaths to the 24th of March, was 1,306; it did not prevail very generally, but many of the smaller towns suffered severely. An emigrant ship from Liverpool, bound to New Orleans, put into a port on the island of Nevis, West Indies, Nov. 23d, having cholera on board. The disease soon after spread over the island, causing great mortality.

In November, cholera was reported in this country, at New Orleans. This city had just passed through a most terrible epidemic of yellow fever, which destroyed 15,085 of its inhabitants, and was now doomed to lose 607 more by cholera.

With the approach of winter, cholera began to decline in all parts of Europe, and as early as Nov. 1st it had ceased to exist in many parts where it had prevailed with great fatality. In Russia, Sweden, Norway, Denmark, France, and England, the reports exhibited a most favorable change at this date, and by the close of the year it had entirely ceased to prevail as an epidemic. This was the close of the third year's progress of epidemic cholera en route to this country.

Although the disease had ceased to prevail as an epidemic, yet, as in the preceding winter, it manifested itself sufficiently frequent to prove that its cessation was rather a hybernation than an extinction. It was very evident that it still lingered in most of the states of Europe; and it was feared, judging from its previous history, that in the summer of 1854 it would be prevalent over the whole continent, and extend to countries yet unvisited. This expectation was fully realized.

Early in the spring of 1854, rumors of the general appearance of cholera in the different cities where it had previously prevailed began to reach us. The cities of Persia suffered severely from this new invasion, Teheran alone losing 11,000 inhabitants. In most of the cities and countries of Europe through which we have traced its progress, it again prevailed, causing a greatly increased mortality. It also spread into new territories, visiting this time many of the cities of Spain and states of Italy previously exempt, and even the Eternal City, where, from its novelty, medical men went about with oiled silk gloves on, so as not to touch the plague stricken. It visited most of the cities on the Mediterranean, the states of Germany, and the countries about the Baltic, assuming in general its most malignant form. In France it spread to most of the provinces and cities during the summer, and up to the present time the total mortality for that country is estimated at 88,626. It is now again on the decline. In Great Britain the epidemic prevailed very generally in the large towns of England, Ireland, and Scotland, during the summer months; but London seems to have escaped a severe visitation until August, when the disease broke out with great severity. It reached its maximum during the last of September, when the number of fatal cases was as high as 1287 per week.

It is impossible at this early period, while the disease is yet on the decline, and few authentic reports of its history in various countries have been published, to give even an approximate estimate of the general mortality. We shall, therefore, proceed to trace the progress of the epidemic as it appeared in this country.

The introduction of cholera to this country was undoubtedly through the medium of emigrant vessels. The ports at which these ships arrive in the largest numbers would necessarily be the first to exhibit the presence of the disease, and the points of departure in its invasion of the country. Accordingly we find that New Orleans, New York, and Quebec, the ports towards which emigration principally tends, the first to announce in their respective sections of the country the presence of epidemic cholera.

We have already noticed the prevalence of the epidemic at New Orleans during the latter months of 1853. The disease did not entirely subside during the following winter, although many of the cases which occurred were imported. In the spring it gradually spread up the Mississippi, visiting the different cities on this river and its tributaries, and extending widely into the adjacent country. Cases occurred at Memphis, Tenn., among boatmen, about the middle of April, and occasional cases continued to be reported, but the disease did not at any time assume a very severe epidemic form. In the early part of May, cases were admitted to the hospitals of Cincinnati, occurring among boatmen on the river; the disease did not, however, prevail in the city until the last of the month, nor as an epidemic until the middle of June. During this latter month, it prevailed quite generally in Kentucky and Tennessee. About the first of June it appeared at St. Louis, Mo., and towards the latter part of the month assumed a severe epidemic form. This city suffered more than any other in the West from the epidemic, the deaths amounting at one time to upwards of 280 in the week. Richmond, Va., was visited by cholera about the middle of June, and other towns in the South and West having much intercourse with the cities already mentioned as being infected with the disease, reported its prevalence.

Without attempting to define accurately the course and progress of the epidemic—a thing impossible while relying only upon current literature—such may be considered, in a general way the history of its invasion of this country from the South.

It was previously noticed that cholera was introduced into one of the West India islands, in the latter part of 1853, by an emigrant vessel, on which deaths from cholera had occurred. About the middle of May of the present year, we have accounts of the outbreak of the epidemic at Barbadoes—being imported from Jamaica, and causing a frightful mortality. In the parish of St. Michael, there was a monthly mortality equal to seven and a half per cent. of the population, the total mortality being over 6,000. It also appeared in Mexico, and at the capital of the latter was very fatal, the deaths amounting to 100 per day.

The second point from which to trace the progress of cholera in this country is the city of New York.

During the latter part of the year 1853, in the month of November, no less than twenty-eight vessels came to this port freighted with emigrants, among whom cholera made its appearance during the passage, causing a mortality of 1,141. Although deaths by cholera were reported in this city for every month of the last half of the year 1853, including June, still it did not at any time assume an epidemic form, and these cases could hardly be considered any thing else than the disease exhibited sporadically. The largest number of deaths for one month, was for December, when 12 deaths by cholera were reported.

During the winter months of 1854, emigrant ships continued to arrive at this port in great numbers, many of which suffered severely from cholera. It usually made its appearance two or three days after the vessel had left the foreign harbor, and disappeared as soon as it reached the soundings off this coast; cases were received from these vessels at quarantine which was seldom free for any length of time from emigrants sick of cholera. The monthly report of deaths by this disease in this city, which in December, 1853, reached

12, fell in January, 1854, to 2; in February and March to 1 for each month, while April was entirely exempt. This period corresponded with its decline over all Europe; and cholera might be said to have ceased to exist as an epidemic.

While the report for April exhibited no deaths from cholera in New York, for May, 1 death was again reported, and for June, 206. This large increase in the cholera statistics was due to the arrival in the city of immigrants from vessels on which the disease appeared at sea, and their being subsequently attacked. The inception of the epidemic may be dated about the 1st of June; it reached its maximum about the 1st of August, when there was for the week ending August 5th, 302 deaths. From this date it steadily declined, and for the week ending October 21st, there are reported but 22 deaths by cholera. During this period it prevailed in Brooklyn and neighboring cities with considerable severity.

In Philadelphia, cholera first appeared about the 17th of June, and reached its maximum during the week ending August 5th, the number of deaths for that week by cholera being 88.* About the same time, the disease appeared in Boston, where it prevailed mildly up to the 1st of October. In most of the larger seaport towns the disease was reported to be present at different periods subsequently to the middle of June, and many inland cities were also visited by the epidemic at this time. Along all the great routes of travel it appeared during the summer months, but without any very definite law of progression, being governed apparently by the temperature of the weather, the course of emigrants, and the condition of towns where they took up their residence. It was reported at Newark, N. J., Baltimore, Washington, and many intermediate places, in the south; at New Haven, Ct., Providence, R. I., Portland, Me., &c., east; Albany, Troy, Syracuse, Buffalo, &c., west.

In pursuing its course westward, it followed the great routes of emigration, and we are not surprised, considering the rapidity of travel by railroad, to find some of the most western cities, where emigrants, especially rendezvous, reporting the presence of cholera at as early a date as the Atlantic cities where they first landed. Thus, cases occurred in Chicago among the recently-arrived emigrants as early as the latter part of April, but did not, as in other places, extend to the citizens before the 1st of June, nor become seriously epidemic until July, after which it prevailed with considerable intensity until August, when it began to decline. The first case reported at Detroit was on the 19th of May, but it did not assume an epidemic form until June, when it broke out among recent emigrants, especially those from Holland, who also suffered severely from typhus fever. For the three months, June, July, and August, during which it prevailed as an epidemic, it is estimated that about 1000 died. At Buffalo the first case occurred June 22d, and isolated cases were reported during that month. In July, it became more general, and for August 223 cases were reported; from this time it declined to the end of September, when it disappeared. Other cities previously exempt were attacked after it had subsided in most parts, as Columbia and Pittsburg, Penn., Rochester, N. Y., Fall River, Mass., St. John, N. B., &c., and in many instances it was of a more malignant type than where it appeared early in the season. From these larger cities located upon the great thoroughfares, the epidemic spread widely in every direction, but it principally followed in the train of emigration, and thus reached the most remote settlements of the West.

The third point from which to trace the progress of Cholera is Quebec. During the last year, the number of emigrants arriving by the way of this city, has been greatly increased. The first case of cholera reported, occurred on the 21st of June, among the passengers on board of two emigrant vessels. From this time it prevailed with considerable severity during the summer. The disease was conveyed to Montreal by passengers of the same vessels, as first infected Quebec, and the first case occurred at the former place, soon after its appearance at the latter. It is estimated that no less than 1300 persons perished at Montreal. From these cities it spread to neighboring towns, and most of the larger places in the Canadas suffered more or less severe attacks during the summer.

As a summary of the prevalence of the cholera in this country, it may be stated that during the spring months it was introduced into all the larger towns by emigrants; that during the summer months it very generally assumed an epidemic form, and with the approach of autumn began to decline in all parts; and by the 1st of October, had ceased to exist as an epidemic, and from most localities had entirely disappeared.

In reviewing briefly the progress of the epidemic cholera of 1854, as above imperfectly sketched, we may notice:

1. That it took its rise, in 1851, in the Southern provinces of Asia, where it is endemic, as in its previous conquests of the world.

2. That it traveled westward, along the great thoroughfares of commerce and emigration, being conveyed from place to place through one of these means. Thus it was conveyed from Bohemia to Breslau; Rotterdam to Antwerp and Havre; Hamburg to Liverpool; Liverpool to the West Indies, New Orleans, New York, and Quebec; and from these latter to every portion of this country.

3. That its actual progress is almost entirely confined to the hot summer months. In the summer of 1851, it spread in Western Asia, and made its appearance in Europe; in 1852, it spread over all Eastern Europe, and wintered in the eastern and southern Baltic provinces; during the hot season of 1853, it reached the western limits of Europe, and made its appearance temporarily in this country; and during the first summer months of 1854, it invaded this country from many points, and spread to the most distant settlements, thus completing its conquest of the civilized world.

Art. VIII.—*Cases reported to the Society of Statistical Medicine, New York.*—(Selected for publication by Committee.)

Two Cases of Bleeding Ulcer, at the Bend of the Elbow, following Venesection—Cured by forcible Extension and Confinement of the Arm in a straight position. By C. R. AGNEW, M.D. Resident Surgeon at the New York City Hospital.

CASE 1.—The first case was that of an unmarried female from the country, aged 19, admitted to the Hospital, March 25th, 1853, under the care of Dr. Cheeseman. While in good health, ten months previously, she had been assaulted by a ruffian, and soon after the shock had been bled from the arm. The incision had never healed and the ulcer had bled since, on the average, an ounce or less daily; its edges had become pouting and elevated, and it had been treated by styptics, escharotics and compression. She had menstruated but once since the injury, and had become anæmic and had occasional hysterical attacks. On admission she was placed upon chalybeates with alœtic purgatives. Shortly after entering the Hospital, upon consultation, an operation for her relief was determined upon, and, accordingly, a crucial incision was made by Dr. Cheeseman, and, after considerable dissection without finding any artero-venous communication or particular bleeding vessel, the arm was extended to the straight position by splints, cold water dressings were applied, and the wound was left to heal by granulation. Subsequent inflammation and unhealthy appearance were relieved by poultices, which were followed by the application of balsam Peru and adhesive strips. Menstruation was soon regularly re-established; the ulcer gradually narrowed to a small point, so as to be nearly healed; and in two months after admission she was discharged.

Two weeks later, part of the cicatrized portion re-ulcerated; the arm became greatly contracted and flexed, and upon a rather forcible effort to extend it the whole cicatrix was torn across.

She was re-admitted to the Hospital, July 31st, 1853, with the arm rigid, and flexed nearly to the shoulder, with the ulcer two inches in length, extending transversely, partly in fissures, nearly around to the olecranon, with no bleeding, but having pouting, indurated edges, considerable swelling, and a puffy unhealthy appearance accompanied by severe paroxysms of pain. It was treated with cold water dressings for nearly a month. The ulcer having now assumed a more healthy appearance, on the 30th of August, under the care of Dr. Watson, the patient was etherized, and the arm forcibly extended with the effect of lacerating the soft parts and extending the ulcer. The arm was retained in the straight position by splints, and with the exception of the occurrence of bleedings several times from the wound, and an attack of parotitis and facial erysipelas, which were treated by mild antiphlogistics, the patient did well, and the ulcer gradually healed. Seven weeks after the forcible extension, the patient was discharged cured, and remained well at the date of last report, three months after.

CASE 2.—The second case was that of an unmarried female, aged 19, from the same locality as the preceding case; admitted to the Hospital, April 15th, 1853, under the care of Dr. Markoe. A month after venesection at the bend of the arm, by the same physician who bled the other patient, or his partner, the closed cicatrix had re-opened with an elevated ungranulating ulcer indurated at the edges, an inch long and three lines wide, usually bleeding, from a slight stain to three ounces daily, and accompanied by lancinating pains and considerable swelling. Menstruation had been regular, and except slight manifestations of hysteria, the general health had continued good. The ulcer had been treated previous to admission by styptics, escharotics, and semiflexion of the arm.

A week after admission, the operation of dissecting away the ulcer and hardened tissues by an elliptical incision was performed; cold water dressings were applied, and the wound was left to granulate, with the arm supported by splints in the straight position. With only a couple of slight attacks of hæmorrhage, the wound gradually healed. Six weeks after the operation, the patient was discharged, and continued well by report three months afterwards.

The President of the Society, Dr. Watson, having had charge of the first case, remarked that the bleeding was from no particular vessel, but seemed to ooze from the capillaries. On the second admission, the ulcer was so extensive, unhealthy, and painful as to raise the question as to whether it was not malignant; and it was only after the secretion of pus, and a more healthy appearance, that he ventured to operate by laceration and extension.

Linear ulcers of the elbow or groin were apt to be very obstinate, and healed best by paring the edges and giving absolute rest. This last was effected in the above cases by the *extension*. He believed both depended upon a scorbutic tendency of constitution.

It was well-known that in some parts of the country the diet consisted largely of salted meats, bread, and tea. Cases of scurvy were not uncommon. He called to mind several instances of scorbutic bleeding-ulcers on patients from the country. Some years since, a man from Rockland county had a bleeding ulcer on each arm successively, which was mistaken for Fungus Hæmatodes by a city surgeon, and removed by deep dissection. The mistake was afterwards discovered, and he recovered under the proper treatment for scurvy.

A middle-aged man from the country was admitted to the New York Hospital in 1837, with a bleeding scorbutic ulcer upon the arm, over the biceps muscle. The difficulty recurred twice after superficial dissections, and the patient fell into private hands.

In going the rounds, he was, at last, treated by Dr. A. H. Stevens, with whom Dr. W. was then associated. By a thorough dissection of the cellular tissue and fascia down to the fibres of the muscle, and other suitable treatment, he soon permanently recovered.

Dr. Detmold thought the circumstance of both patients residing in the same locality, worthy of remark. He had noticed lately, in one of the journals, that in a certain district in Germany, the operation of circumcision among the Jews had been followed by unhealthy ulceration, which was at last discovered to be syphilitic. Were there any suspicious circumstances about these cases in the N. Y. Hospital?

Dr. Agnew, in reply, stated, that in answer to a note of enquiry, the physician, in whose practice the cases had occurred, stated that the lancet used was new and clean.

Dr. Peaslee remembered an otherwise healthy man, 70 years of age, formerly under his care, with an obstinate, bleeding ulcer over the scapula, which was at last cured by dissecting the fungous, unhealthy portion completely away, and confining the arm so as to give the parts perfect rest.

Case of Dementia in a Child subject to Epileptic Seizures. By J. G. SEWALL, M.D., *Visiting Physician to the North-western Dispensary.*

This boy, æt. 10, from his mother's account, for the first six months of his life appeared endowed with all that usually belongs to children of that age. He was then attacked with diarrhœa, the dejections being of a greenish hue and accompanied with much pain. For this he was treated, as his mother reports, with large and repeated doses of calomel. As he was recovering from this affection, after a lapse of 4 or 5 weeks, he was seized with a succession of spasms occurring nearly every day for three months, presenting the characteristics of epilepsy, rigidity of the muscles, rolling up of the eyes, &c. At these times he would often put his hands to his head and beat upon it, toss his head back and strike upon the back of his neck with his fists. From this time forth he seemed to have nothing left to guide him but an inferior kind of instinct. The convulsions occurred more or less frequently up to the age of two years, since which he has had none. Occasionally, however, he has a spasmodic closure of the jaw, with some muscular rigidity, of momentary duration. While an infant, he would be seized at times, with uncontrollable fits of crying, lasting sometimes 12 hours, and would also have immoderate laughter; attacks presenting the characteristics of hysteria.

Since he was six months old, he has never appeared to be possessed of reason, judgment, memory, or any perceptive or reflective faculty. He has never spoken an intelligent word, but moans and cries at times unmeaningly. He has never been known to fix his attention upon any thing, but has a passion for seizing whatever comes within his reach, which when once attained, he throws regardless away without noticing or caring for it. His eyes are ever wandering restlessly about, and never fix themselves upon any thing. At times he would seem to exhibit affection for his mother, but quite as often would he be indifferent to her. As for food, he exhibited a fondness for tea and meats, but was possessed of a morbid wanton appetite, cramming into his mouth such things as it would admit, without noticing what they were. In this way he devoured sticks, grass, paper, ashes, coal, &c. Oftentimes he would tear off the wall paper and thrust it down his throat. He needed constant oversight, being as likely to run into the water as anywhere. He avoided, however, the fire, appearing to have some notion of its hurtful properties. He was never paralytic, though, like all idiots, his movements were singularly awkward.

During an epidemic of dysentery, he fell a victim to the prevailing disease. He had been sick about a week when I first saw him on the 10th of September. His evacuations were always past standing. Much trouble was experienced in treating him, as he was in a state of constant agitation, and seemed averse to taking medicine. It required the undivided attention of one person to keep him in bed. He died on the 13th of September very much emaciated, his discharges for some time previous having become quite natural and much less frequent.

Autopsy 22 hours after death.—*Brain.*—No alteration in structure or substance could anywhere be detected. It was, however, very much firmer than natural, amounting almost, in some parts, to the consistence of softish liver. There was considerable congestion noticeable, and the whole brain was a shade darker color than is natural. There was considerable fluid within the arachnoid membrane, but very little was found in the ventricles. No unusual amount of fluid in the chord. *Lungs* and *heart*, *kidneys* and *stomach*, were healthy.

The *large intestines* contained about the cœcum much fæcal matter. The mucous membrane of the first half of colon was dark-red, thickened and softened. It abounded in ragged, shreddy masses, which seemed to depend from it. In last half the redness was greater and more uniformily dark. The slightest touch here separated the mucous from the muscular coat, which everywhere seemed healthy. The mucous membrane of last half of colon was reduced to a red pulpy matter, and and was everywhere so much disorganized, that it seemed to be rather a secretion of the intestine than one of its coats. No where could strips of it be raised of more than a line in length. There were no distinct ulcerations anywhere. The *small intestines* were not examined.

Case of Ascites from Metro-peritonitis, in which there occurred a Spontaneous opening of the Abdominal Parietes, and a free and long-continued Discharge of the Dropsical Effusion. By Elisha Harris, M. H. Physician to the N. Y. Dispensary.

Mrs. F., æt. 40, aborted at the sixth month of her first pregnancy; and, being of a good constitution and in full health, after the third day, she resumed her usual laborious avocation of a laundress, and was thereby often exposed to dampness and the alternations of temperature incident to such labors. About two weeks subsequent to the abortion she began to suffer some pain in the pelvic region; but never had she suffered any pain in that region previously. She soon became obstinately constipated, and suffered much from anorexia, nausea, and general *malaise;* but she did not desist from her labors and exposures. During the fifth week after abortion she first observed that her abdomen was becoming enlarged, but at this time and subsequently she did not suffer any pain. At the beginning of the seventh week she first sought medical advice at the N. Y. Dispensary. Her abdomen was largely distended with fluid, the pulse was feeble, extremities unnaturally cold, the skin pale, urine scanty; her thirst was insatiable, and the appetite capricious and feeble. The uterus and ovaries were greatly enlarged, but not sensitive to the touch or to pressure. The ovaries seemed to be as large as medium-sized lemons, and were hard.

The diagnosis being that there existed *metro-peritonitis*, the patient was put upon appropriate specific treatment and tonics. Still the effusion increased very rapidly, so much so, that on the sixth week after commencing treatment, I advised her to submit to the operation of paracentesis. She objected. About this period I observed a hernia forming at the umbilicus, which, in the course of ten days, increased to the size of a large orange. A small cutaneous abscess now formed on one side the hernial sack, and on the day it matured the hernial tumor burst, and the fluid flowed very rapidly from the peritoneal cavity, until more than twenty-eight (28) quarts were discharged, twenty-four (24) of which were actually saved in pans for my examination. I was immediately called, and when I arrived, it being nearly two hours after the event, this fluid was found to be coagulated, and was of the consistence of a thin jelly.

The dropsical effusion was nearly all evacuated, and I completed the process by means of a canula and the double roller. The patient was put upon a highly nutritious diet, and allowed the use of quinia and wine thrice daily. The compression was continued, and the opening at the umbilicus continuing patulous, there was discharged daily about a teacupful of lymphy serum. No new symptoms occurred, but the patient gradually sank, and died on the fifth week after the opening and discharge had been established.

No autopsy could be secured, but it is believed that the rapid enlargement of the ovaries and the uterus was not dependent upon carcinomatous disease, but upon simple hypertrophic inflammation. It is a remarkable fact that, even to the last, when the patient was excessively prostrated, the peritoneal effusion continued to be of a highly fibrinous character—so much so, that it coagulated when exposed to the air.

After this spontaneous evacuation of the dropsical fluid had occurred, and a free opening for continued drainage, as well as for the ingress of air, happily established at the umbilicus, the patient manifestly enjoyed all the facilities for recovery that any artificial provisions of the kind could afford; but, in this case, these provisions certainly proved unavailing, though every effort was made to abate the primary disease and sustain the strength of the patient. It should be remarked that the treatment which afforded the greatest relief to the patient, and seemed to produce the most favorable effect upon the disease, as indicated by the amount and the nature of the discharged effusion, consisted of iodide of potassium with quinine and wine during the day, and pill hydrarg. cum opii, at night. As regards the ingress of air to the peritoneal cavity, it unmistakeably excited general and grave peritoneal inflammation; and, though after the second week it was carefully guarded against, it continued to be a source of constantly recurring injury to the patient, as the air was necessarily admitted at the daily dressings.

To the writer, this case has been an instructive one in many respects, but particularly as regards the mode which has recently been proposed for the cure of ascites, by means of continued direct drainage, and the introduction of air, &c., into the peritoneal cavity.

Case of Diaphragmitis, with Pleuritic Effusion. By John W. Corson, M.D. Physician to the N. Y. City Dispensary.

E. C., aged 42, lighterman, strong and muscular, was struck on the 18th of October, 1853, with the boom of a lighter over the edge of the left ribs, or from the seventh rib above and laterally, and from within two inches of the spine posteriorly, downwards and forwards over the floating ribs, and left hypochondrium, producing considerable abrasion, discoloration, and tumefaction, but no fracture of the ribs. He was senseless from the blow for several minutes, and faint and collapsed for two hours. On my reaching him, six hours after the injury, he was just beginning to rally, though the pulse was still somewhat feeble and slow. He complained of occasional severe pain in the region of the diaphragm; sometimes shooting towards the umbilicus, with considerable difficulty of breathing; respiration mainly thoracic. The distress was increased by pressure from the abdomen upwards. Ordered 12 leeches and an anodyne poultice over the bruised ribs; and, to relieve the bowels, previously torpid, and abdominal pain, a brisk purgative of compound jalap powder, ginger and calomel; to be followed by low diet.

19th (2d day).—Much the same Bowels moved freely towards noon. At five o'clock in the afternoon I was suddenly re-called in great haste, and found him with the knees retracted, the head raised, panting for breath, *with his face completely distorted with the sardonic grin, and screaming at every breath, with pain referred to the region of the diaphragm*, accompanied with a sense of great constriction. Respirations 30, thoracic; pulse, 90, firm. He was promptly bled from the arm from a large orifice, to 24 ounces. He fainted immediately from the bleeding, and several times subsequently, so as to suppose himself dying, with the effect of relieving the terrible pain till the faintness left, when it returned. Ordered two grains of opium and five of Dovers' powder every hour. Having taken about eight grains of opium in three hours, with little soothing effect, with stimulants near, and the finger on the pulse, then somewhat rallied, he was, in the most cautious and gradual manner, allowed to inhale, at intervals, a mixture of equal parts of ether and chloroform, till in an hour after, the pain was lulled as by magic, and he fell asleep. Ordered soon after two grains each of opium and calomel every 4 hours.

20th (3d day).—No marked dullness over the lower part of left lung discovered on the light tapping that could be borne—loss of motion in the side, probably in part from pain. Respiratory murmur faintly heard; area of dullness enlarged over the spleen; *frequent greenish slimy stools tinged with blood, with dysenteric griping;* tongue with whitish fur; thirsty; pulse 90, compressible; complains of exhaustion with pain; rather severe in the left hypochondrium, sometimes shooting towards the umbilicus. Ordered to discontinue calomel, but continue the opium in two grain doses with morphia suppositories; *and a very large blister* over the left hypochondrium and reaching to the umbilicus; directed to use rice-water and arrowroot with beef-tea.

21st (4th day).—Blister acted "like a charm;" pain was quite gone, allowing a better examination; there was some dullness on percussing the ribs; loss of motion; absence of respiratory murmur; indicating *pleuritic effusion* from the margin of the ribs about four inches upwards; stools rather dysenteric but improving; the urine was reddish and charged with lithates.

22d (5th day).—Passed a couple of large evacuations mostly of dark liquid blood; spleen diminished in size; otherwise the patient was much better. The irritable bowels were quieted with powders of bismuth and opium; the moderate pleuritic effusion yielded in a few days to a succession of blisters, and five grain doses of the iodide of potassium, three times a day in a mixture, with a few drops of camphorated tincture of opium.

From this time, with broths and nourishing diet he steadily improved; and three weeks after the accident, was discharged cured.

Remarks.—Inflammation of the diaphragm is so rare an affection, that any example of it seems worthy of careful study. In this case, to borrow a legal phrase, the evidence was only strongly circumstantial, like that of gastritis nephritis, and other affections of deep-seated organs ending in recovery. Fortunately for the patient, there was no post-mortem as a final test.

The striking early symptoms, of the presence of motion of the thorax in breathing, with its absence in the abdomen, reversing the signs of pleurisy; the existence of the respiratory murmur, on the side affected, faint indeed from pain; and the absence of dullness on percussion; the location of the injury with the diaphragm, as its centre, and the reference of the first pain to that spot; the terrible severity of the distress exceeding that of ordinary acute pleurisy, and the curious characteristic grin of the face, the true *risus sardonicus* of the old authors—all pointed to the diaphragm, as the seat of the first inflammation. Some of these symptoms, it is true, were subsequently modified by the extension of inflammation upwards, and the limited pleuritic effusion. Other very frequent signs of diaphragmitis were also wanting. The probable limitation of the inflammation to the extreme left portion of the diaphragm might explain the absence of hiccup, as also the vomiting, usually present when that central portion near the stomach is involved.

Delirium, so common in the worse cases, was also wanting; yet a reference to the records of this disease shows that it is not essential. Though subsequently mentioned, it is not enumerated in the definition at the head of the very learned and complete article on the subject by Copland. Boerhaave and some of the older writers have described this variety, under the term Paraphrenitis; but Morgagni distinctly affirms in a case in which it happened to be present (Letter vii, Art. 14,) that he does not "necessarily conjoin a delirium with inflammation of the diaphragm."

The occasional absence of delirium is noticed by Renauldin in his article on Diaphragmite in the *Dict. des Sci. Méd.* A case mentioned by Andral, in which a patient with phthisis was suddenly seized with excruciating pain beneath the left false ribs, who gradually sank without delirium, and on a post-mortem, exhibited a vast cavity, with the diaphragm beneath lined by thick false membrane, through which at last a rupture forming a slit an inch and a half long had occurred, allowing a large quantity of pus to escape into the abdomen.

The most obstinate symptom in our own example above was the excruciating pain, so severe as to resist a dozen leeches, eight grains of opium, and a large bleeding, to repeated fainting,—till at last it yielded to the protracted and very cautious inhalation of *chloroform.* Pain like this, as in peritonitis, has sometimes destroyed life. Such was the conclusion of Andral, in the very interesting first illustration of "Diaphragmatic Pleurisy" in his *Clinique Médicale* A worker in ebony, while engaged in his occupation, was seized with a shivering, followed by excruciating pain in the left hypochondrium, with rapid difficult breathing, agonizing expression, and occasional delirium and other symptoms little relieved by repeated bleedings and leechings till in a few days he sank; and, on examination after death, there were simply found adhesions between the base of the left lung and the diaphragm with a coating of albuminous exudation—without any more liquid effusion or extension of the disease.

One of the most curious symptoms of diaphragmitis is the *sardonic grin*, which happened to be present in our own case. It was wanting in all the five cases given by Andral, and, indeed, was never seen by him. We were much pleased with the exposition given of the cause of this symptom in one of the discussions of this Society, by Prof. Peaslee—on the authority we believe, of some recent investigations of Lurschka—by which the *risus sardonicus* is attributed to reflex action through the connections which the Phrenic nerve is found to have with nerves supplying the platysma myoides and other superficial muscles.

Were the troublesome dysenteric discharges simply the effect of the drastic purge, irritating the colon; or, was there possibly mechanical injury from the blow across the yielding abdomen?

The case illustrates the frequency with which blows, falls, and sudden shocks are causes in the few instances that occur, of inflammation of the diaphragm. An example is given by Dr. Wheelwright in the sixth volume of the Medico-Chirurgical Transactions, of a seaman who fell from the top of a coach, producing in a few hours terrible pain at the diaphragm, with vomiting of blood, in which, after death, a slit in the diaphragm was found, through which a portion of the stomach protruded. A young mother is mentioned by M. Percy, who ruptured the diaphragm in efforts to suppress labour pains.

In the *Lancet* for June, 1840, a case is related by Dr. Munk, of a man who fell overboard into the river, and was subsequently seized with symptoms of inflammation of the diaphragm, terminating fatally; in which it was found, after death, pressed down, with effusion covered with lymph, and the muscular substance darkened and softened.

The location of the disease in the case we have detailed, depended upon accident.

In a learned work of Dr. Mehliss, entitled "*Die Krankheiten des Zwerchfells des Menschen*," which we perceive, is freely quoted, diaphragmitis, is stated to occur, most frequently, on the left side.

In conclusion, we may briefly remark in reference to the treatment, that the case we have detailed, illustrates the great service chloroform and ether may render in all cases where death is threatened from *pain* alone. Where bleeding and opium fail to relieve, they will doubtless prove valuable in severe cases of peritonitis. The troublesome dysenteric discharges, though interfering with the exhibition of mercury, so useful in inflammation of serous membranes, yet doubtless proved powerfully revulsive, diverting thoracic irritation by abdominal, as pointed out by Dr. Stokes.

Case of a Vesical Calculus, in a Female Child, which Escaped from the Bladder through the Vagina. By STEPHEN SMITH, M.D.

THE subject of this history was a female child, of good constitution, and healthy parentage. She was brought to me about the first of July, 1852, suffering from a slight attack of diarrhœa; she was then two and a half years old. In concluding the history of her case, the mother mentioned incidentally that the child had some difficulty with her water; that she passed it frequently with much pain, and occasionally the urine was tinged with blood. I prescribed for the diarrhœa, and requested her to return with it when it was better of its present complaint.

In about a week she accordingly brought the child again, and I examined it in reference to the dysuria. I learned from her that the child had never been free from complaint in the passage of her water, but had always suffered more or less irritation; that the difficulty had latterly gradually increased, until she came to pass water often and in small quantities, each effort being attended with bearing-down pains, and concluded with violent scratching and tearing of the external genitals with the fingers. These occurred as often as every half-hour during the day, and generally as frequently during the night, on account of which she seldom obtained sound and undisturbed sleep for an hour. When asked where it had the most pain, it always placed its hand over the stomach. She had never exhibited any other signs or symptoms of being troubled with worms, than this irritation about the bladder. Still she had good flesh, and was quite as plump and rotund as children of that age, ate heartily, and digested her food well, and, though never away from her mother to whom she always ran when these attacks came on, she enjoyed her play with other children. Her skin, however, was pallid like anæmia, and her countenance wore a settled expression of irritability. On examination, the external genitals were found excoriated, as also the thighs, from the involuntary escape of urine; but the mucous membrane of the vagina, and the orifice of the urethra were of their natural appearance, and gave no evidence of any local irritation.

The mother was directed to give the child warm hip-baths at night, mild laxatives, and a mixture containing liq. potassæ, tinct. hyosciamus, and nitrous ether. This latter was given for the purpose of correcting any preponderance of lithic acid in the urine, which, by its irritation of the neck of the bladder, might be the cause of the dysuria.

In about a week the child returned, unimproved. The same treatment was continued with the addition of infusion of buchu. This produced a marked improvement for a short time, when it finally failed to give any relief. An effort was then made to obtain an examination of the urethra and bladder, with reference to the lodgment of a small concretion in the former, or the existence of a calculus in the latter, but the mother refused to allow any force to be used to restrain the child, or the administration of an anæsthetic. No specimen of her water could be obtained for examination, as she passed it in small quantities upon her clothing.

Upon questioning the mother more closely in reference to the presence of ascarides in the rectum, she recollected to have seen upon her night-clothing small bodies, which, from the description she gave, answered very well to these creatures. Failing in obtaining an examination of the bladder to settle the question of the presence of a calculus, in addition to the remedies already in use, the mother was directed to administer injections of lime water.

This had no effect whatever, either in dislodging any thing from the bowel or in relieving the symptoms. After this, she resorted successively to injections of turpentine, solution of common salt, assafætida, etc., at the same time keeping the bowels soluble with aperient medicines. These means were continued until each in turn had a faithful trial. The child gradually grew worse, the paroxysms became more violent and long continued, resembling in their accession labor pains, the patient placing her hands upon her sides and bearing down with all her force, and concluding with tearing the genitals violently with her fingers.

At this time an examinatian of the urethra, with a large probe, was obtained, which only proved that no calculus was lodged in this channel. As the child had not taken an anæsthetic, and resisted violently all efforts at restraint, no satisfactory examination of the bladder could be obtained. In consultation, the question of the existence of calculus was discussed, and considering the sex and age of the patient, the examination that had been made, and the character of the symptoms, it seemed more probable that the source of irritation was in the rectum than in the bladder. The remedies advised were again directed to the removal of worms. The last of these vermifuge medicines employed was santonine, which acted powerfully as a cathartic, but without effecting the desired object. The opinion that the cause of so much vesical irritation could be worms was now abandoned.

Nearly two months had now elapsed since the child first came under observation, and it had grown materially worse. The only treatment which now suggested itself as adapted to the case, was anodynes to allay the irritation, and such general remedies as the system might require. But no form of anodyne, however employed, whether given internally, by injection, or applied locally, had the slightest effect in preventing the paroxysms of pain, or in diminishing their severity. Still the general health of the patient did not suffer markedly, her appetite continued good, and she did not lose flesh. It was now very evident that these paroxysms of dysuria, which did not cease to recur day or night, and by which alone the life of the little sufferer was being gradually worn out, was due to a calculus in the bladder, and as the parents refused to have any further examination attempted, my attendance was discontinued.

For a time it had no medical attendant. I saw it at intervals, and always found it worse. The mother gave it every variety of medicines that was suggested to her, the most of which were active cathartics. At one time its mouth and fauces were completely covered with aphthous sores, it vomited almost everything that it swallowed, and had a severe diarrhœa. It recovered from this condition readily with mild remedies. Still later, it had convulsions of the most violent kind, commencing with a paroxysm of pain, and terminating when it subsided. These finally ceased to recur, and were followed by a slight prolapsus of the rectum, this continued to increase until it became a very troublesome affair. At this time, about three months after it first came under observation, another physician was called in and the mother ceased to bring the child to me.

It passed in succession under the care of several physicians, in private and public practice, and was variously treated as a case of prolapsus of the rectum, masturbation, etc. The case finally terminated fatally about ten months from the date at which it was first seen, by the escape of a calculus from the posterior, wall of the bladder into the vagina, and through this passage externally. Its escape into the vagina was followed by a fœtid discharge from the genital organs, and rapid sinking of the system. It was first discovered by the mother protruding between the labia, and was removed by tho physician in attendance. The child sank and died the following day. No examination of the parts was made after death.

The calculus was nearly an inch in length, by half an inch in thickness, being shaped very much like an egg.

Remarks.—In connection with the history of the preceding case, it will not be uninteresting to institute an inquiry into the comparative frequency of calculous disorders in children, and the different methods by which a spontaneous cure may be effected.

The opinion is very generally prevalent that vesical calculi occur *much more* frequently in children than in adults. Systematic writers on the diseases of children, and of the urinary organs, almost without exception, give currency to such views. This opinion seems often to be no more than the repetition of that entertained by a preceding writer, while others give some statistics, as the basis of the assertion. West, one of the most recent and able writers on the diseases of children, remarks, "Although most diseases of the urinary organs are less common in children than in grown persons, yet calculous disorders are far more frequent in early life, than adult age." The data upon which he bases this remark is a statement by Dr. Prout that of 1,256 patients received into Bristol, Leeds, and Norwich Hospitals to be operated on for stone, 500, or nearly 40 per cent., were children under ten years of age. If the age of fifteen is the limit of childhood, physically considered, it is not probable that the number of patients included between ten and fifteen, would increase the per centage to more than fifty, or one-half.

Brodie, in his *Lectures on the Diseases of the Urinary Organs*, referring to the frequency of calculous disorders, says, "You know how large a proportion of hospital patients admitted are children,' and favors the old notion that, among the lower classes, children are much more liable to calculus than adults. Gross does not express an opinion, but in quoting some statistics of Civiale, who maintains this view, he may be considered as endorsing it. The latter author believes that the number of children affected with calculous disorders, is greater than is usually supposed. He found that out of 1881 cases, 1126 occurred in patients under seventeen years of age. These figures give a large preponderence of children over adults.

We think, however, that they are overstated, and that a more general comparison of facts will materially modify the conclusions to which he has arrived. We do not mean to say that children are not equally as liable to be the subjects of calculous diseases as adults, or perhaps somewhat more so, but statistics prove that much depends upon locality, and less upon difference of age, in the prevalence of calculi, than authors generally teach.

The first table which we introduce is from Mr. Hutchinson who instituted a careful inquiry into the frequency of calculous diseases among seamen. His communications on this subject are contained in the *Medico-Chirurg. Transactions*, vol. 9 and vol. 16, and are entitled "*An inquiry into the comparative infrequency of Calculous Diseases among sea-faring people.*"

Places.	Total no. Cases.	Under 14.	Above 14.
Aberdeen Infirmary,	68	13	55
Bristol, "	33	15	18
Dundee " Arbroath,	78	21	57
Edinburgh and Leith,	63	15	48
Glasgow and Greenock Infirm.	32	9	23
Haslar Naval Hospital	2	0	2
Liverpool Infirmary	16	8	8
London Hospital, London,	41	19	22
Newcastle-upon-Tyne Infirmary,	31	0	31
Norfolk and Norwich Hospital,	117	43	74
Plymouth Naval Hospital,	2	0	2
Total.	483	143	340

From this table, which embraces a total of 483 cases, only 143, or less than one-third, were under fourteen. Mr. Hutchinson also incidentally remarks, that it can be shown as the result of his inquiry, that more adults are the subjects of operations for stone than children. It may, however, be objected to his tables, that they were prepared for a different object, and only such hospital records were consulted as concerned seamen.

A comparison of the reports of the civil hospitals of Europe, therefore, will obviate this objection. The accompanying table is prepared from the statistics of operations in such hospitals, and, as they embrace a wide extent of territory, they are most important, as they show clearly how much the frequency of these disorders in different ages is influenced by locality.

	Total.	Under 15.	Proportion under 15.
Norwich,	478	227	Less than $\frac{1}{2}$
Naples,	666	315	" " $\frac{1}{2}$
"	643	321	About $\frac{1}{2}$
St. Petersburgh,	469	357	" $\frac{3}{4}$
Austria,	175	55	Less than $\frac{1}{3}$
Bavaria,	239	116	" " $\frac{1}{2}$
Bohemia,	106	28	More than $\frac{1}{4}$
Denmark,	145	14	Less than $\frac{1}{10}$
Egypt,	42	1	$\frac{1}{42}$
France,	2822	1347	Less than $\frac{1}{2}$
Lombardy,	1058	796	" " $\frac{3}{4}$
Rome,	49	10	Nearly $\frac{1}{5}$
Sardinia,	140	97	Less than $\frac{2}{3}$
Ulm,	127	64	About $\frac{1}{2}$
Total,	7159	3748	More than $\frac{1}{2}$

From this table it appears that out of 7159 cases, 3748 were under 15 years of age, or a very little over one-half. If we examine the report of different hospitals with a view to a critical analysis of the proportion of cases of the two classes, we find that it is only in a few, and those in peculiar localities, that the children exceed the adults.

To show the general immunity of children, from calculous affections, we may refer to the reports of Institutions devoted especially to this class of patients. Thus, during twenty-seven years, 1151 children were admitted into the Foundling Hospital, and for this period there were three cases of stone. In the Asylum at Chelsea, out of 6000 admissions, not one case occurred. At the hospital for children in Paris, where 3000 children are received annually, there were previously to 1842 only four cases on an average. At the St. Marylebone Infirmary where there has been on an average four and five hundred children annually, a case of stone has not occurred in twenty years.

An examination of the Reports of Institutions for children in this country gives similar results. The number of children upon Randall's Island for the year 1850 was 1136, and no case of calculus is reported, the number in 1853 was increased to 2241, and for this year one case of calculus was reported. The *Colored Orphan Asylum* which has on an average nearly two hundred inmates, reports no case of calculus, although Dr. Gross considers colored people peculiarly subject to stone.

We must conclude, therefore, that the opinion that children, as a class, especially among the poorer classes, are *much more* liable to calculous disorders than adults, is not well founded.

Vesical calculi effect a *spontaneous cure*, by escaping from the urethra. This is not infrequent in females, owing to the shortness, size, and distensibility of the urethra, and to this cause, far more than difference of habits, is due the marked exemption of this class from vesical calculus. It is astonishing how large a calculus may pass the female urethra. Dr. Mullineux reports a case in the *Philosophical Transactions*, vol. 17, where a female sixty years of age passed a stone by the urethra, $7\frac{3}{10}$ inches long, and $5\frac{3}{4}$ inches in diameter.

Stones of very large size may pass the male urethra, but more often they become impacted, and give rise to great local trouble. Large stones in the male bladder occasionally undergo spontaneous division, and are then passed off.

Dr. Heister relates a case in the *Philosophical Transactions*, vol. 37, 1731, where a man of sixty, who had long suffered from symptoms of stone, and was accustomed to feel his bladder contract strongly around the calculus after urination, one day felt the stone break, and afterward voided upward of an hundred irregular calculi at different times, and completely recovered.

Another method of spontaneous cure is by the ulceration of the calculus through the coats of the bladder, and its escape from another outlet as in the case above related, or directly through the perineum. Deschamps, in his *Treatise on Lithotomy*, mentions several cases in which the calculus escaped through the vagina. A case of this kind is reported in the *Medical Gazette*, February 7, 1840. The patient a maiden lady, æt. fifty-six, had experienced dysuria two years, when the urine began to escape from the vagina, mixed with pus. The disease was mistaken for cancer of the womb, and the stone which finally became visible, covered with a whitish membrane, was allowed to remain just within the external organs nine months, under the belief that it was cancer. She recovered with a vesico-vaginal fistula. A case occurred recently in one of the London Hospitals.

A more remarkable method of spontaneous cure in the female is in the passage of the stone through the vagina into the rectum, and finally escaping from the anus. A case of this kind is related in *Phil. Trans.*, vol. 41, 1740, by Mr. Macharness. A female, æt. 31, had children in rapid succession, but, after each labor, she suffered much from fever. Every child was noticed to have a dent upon the left side of the head, above the temple. Her two last children were still-born, though they were alive just previous to birth. Her symptoms at length grew more serious, she had pain in the back, loins, and bladder, obstinate costiveness, and passage of flattened fæces. These symptoms continued several months, when her urine became fœtid and contained pus. The catheter detected a tumor, but not a stone, upon one side of the bladder. Finally, pus ceased to flow in the urine, but made its appearance from the vagina like leucorrhœa; pain was constant and very severe. The pus finally ceased to flow from the vagina, and began to discharge from the anus. She experienced weight, pain, etc., in this region, and emaciated from her constant suffering. At length, while straining at stool, she felt a hard substance protruding from the anus. The surgeon was called, and removed a large ragged stone, weighing 8½ ounces, and being 10¼ inches in circumference. She rapidly recovered.

When the stone ulcerates its way out of the bladder in females, it is more likely to pass through into the rectum than to escape from the vagina, owing to the construction of the sphincter-vaginæ, and the cul-de-sac into which it falls.

When the stone escapes by ulceration in the male, it may pass from the perineum, scrotum, or even the thigh. M. Louis has related many cases of this kind, in the *Mém. Acad. Surg.*, vol. 3, in an article :—*Sur les Pierres urinaires formées hors des voies naturelles de l'Urine.*

ART. IX.—*Mortuary Statistics of the "Genesee Country," for the year 1799. Communicated.* By A. WILLARD, M.D., of Greene, N. Y.

[WE feel assured that the following curious document is not without interest to the medical historian, or general reader. The following account of it we copy from a paper of Dr. W.'s, in vol. 10, *Old Series*, of this Journal. "The paper was handed to me by Mr. Cameron, an old gentleman residing in this place, (Greene, N. Y.—*Ed.*) who was at the time an Assessor of one of the towns, and engaged in getting up the statistics. It was done by the direction, and at the expense of Charles Williamson, Esq., agent of the Pultney estate, for the purpose of showing the health of the county; as a report had got abroad, that it was very unhealthy. The county of Ontario, at the date of this document, comprehended the whole of the State west of the pre-emption line, which was a line drawn from Sodus Bay, on Lake Ontario, southerly through, or nearly through Seneca Lake, about a mile east of Geneva, to Pennsylvania line, with the exception of the county of Steuben, which had been erected the year previously. Several of the towns named in the paper, do not now exist; and I have endeavored, so far as I am able, to note some of the towns which now occupy their places. I may be mistaken in some instances, but I believe I am pretty generally correct."

The settlement of the "Genesee Country" may be said to have begun in 1791, and to have been, in a measure, completed in 1806. During this period, few of the settlers escaped "a seasoning;" and "endemic fever," or, as it was more generally called, "Lake fever," made sad havoc with the health, and not unfrequently with the lives, of the inhabitants. Dr. Alexander Coventry, in his annual address before the New York State Medical Society, in 1824, has given us a history of this fever—the disease which gave rise to the report of the unhealthy character of the country. The matter of the tables, Dr. Willard informs us, is copied verbatim et literatim.—*Eds.*]

A Register of the Free Inhabitants in the Several Towns Comprehending the County of Ontario, in the Genesee Country, estimated and certified by the Supervisors and Assessors of the respective Towns or Districts from their assessments, taken in April, 1799, *together with number of Deaths in each Town, within the compass of the year* 1799. Ontario County, January, 1800.

NAMES OF TOWNS OR DISTRICTS.	Number of Inhabitants.	No. of Deaths			BY WHOM CERTIFIED.
		Adults.	Infants	Total.	
Canandaigua	800	4	6	10	Abner Barlow, Supervisor, Luther Cole Hugh Jameson Assessors of Canandaigua.
Easton, [now, Hopedale and Gorham]	364	1	--	1	Daniel Gates, Supervisor, Elijah Murray, James Austin, Assessors of Easton.
Middletown, [now Naples]	226	--	--	--	Jabez Metcalf, Supervisor of Middleton.
Bloomfield	1836	1	2	3	Ebenezer Curtis, Supervisor of Bloomfield.
Palmyra	804	3	1	4	John Swift, Supervisor, John Hurlburt, Thomas Goldsmith, Assessors of Palmyra.
Charleston, [now Lima]	600	8	2	5	Solomon Hooey, Supervisor, William Williams, Zebulon Norton, Asahel Warner, Assessors of Charleston Samuel Stephens, Physician.
Genesee, [now Geneseo]	354	3	3	6	Wm. Wadsworth, Supervisor of Genesee.
Bristol	583	1	3	4	William Goodwin, Supervisor, Nathaniel Fisher, Elisha Parrish, Faunce Coddings, Assessors of Bristol.
Pittstown, [now Richmond and Honeysye]	336	--	--	--	Lemuel Chipman, Super. of Pittstown. Cyrus Chipman, M.D.
Phelps	----	--	--	--	Joel Prescott, Supervisor, Philetus Swift, Foster Barned, Assessors of Phelps.
Northfield, [now Pittsford and Penfield, &c.]	356	--	--	9	Josiah Fish, Supervisor, Noah Norton, Nathan Nye, Alex. Dun, Assessors of Northfield.
Augusta, [now Middlesex]	371	1	--	1	David Southland, Supervisor, M. Pierce, William Houlten, Assessors of Augusta.
Northampton, [now Rochester and West of it]	696	7	2	9	Josiah Fish, Supervisor of Northampton.
Farmington	400	--	--	2	Otis Comstock, Supervisor, Asa Wilmarth, Assessor of Farmington.
Sodus	189	--	1	1	Charles Cameron, Samuel Coldwell, Assessors of Sodus.
Jerusalem	1320	8	3	11	Eliphelet Norris, Supervisor, Thomas Lee, Assessor of Jerusalem.
Hartford	450	5	4	9	Ebenezer Merry, Supervisor, Job Peine, Benj. Pearsons, Jno. Beace, Nath. Naramon, Ass'rs. of Hartford.
Sparta	360	--	--	--	William Harris, Supervisor, John Smith, Assessor of Sparta.
Seneca	1248	2	7	9	Samuel Colt, Supervisor, Thomas Powell, Assessor of Seneca.
Total	12200	39	34	84	

ONTARIO COUNTY, ss.

WILLIAM SHEPHERD, being duly sworn, saith, That the persons named in the

DISEASES.
One with a Puerperal Fever. A child of Hydrocephalus Internus. An infant of a Suffocatio Stridula. An adult with a Billious Remitting Fever. An infant of an Intermitting Fever with Diarihea. An infant with excess of stimulas. An adult of a Phthesis Pulmonalis. An adult of a Billious Fever. An infant of an Intermitting Fever. An infant of Diarihea.
One, aged 60, of Nephaites.
One, 70 years of age, of an Intermitting Fever. An Infant with a Swelling on the Throat. An Infant 10 months old, never well.
A person 40 years of age, from a Hurt in the Breast which caused an Ulceration in the Vitals. One adult, by the fall of a tree in a storm. One of a Puerperal Fever. An infant of a Cholick.
(Diseases not mentioned.)
One person 60 years of age. A middle-aged person of Billious Fever. Three infants with diseases which are natural to infancy.
One infant burnt to death with fire. The diseases of the other not mentioned.
An adult of a Consumption. One adult from a Mortification, proceeding from old wounds. One adult of an Intermitting Fever, aged 75 years. The infants with disorders natural to infancy.
The number of adults or infants not specified, nor diseases mentioned.
70 years of age, with a consumption of 20 years.
Four of a Billious Intermitting Fever. Two of a Puerperal Fever. One with a Cancer. Two with diseases natural to infancy.
Diseases not mentioned
Of a Billious Fever.
Two of a Puerperal Fever. One of a Hychops, 55 years of age. Two, aged 75 and 60, of Consumption. One of a Putrid Fever, 65 years of age. One, aged 25 years, Remitting Fever. An infant of a Dysentery. An infant one day old. An infant of a Tymphanum. An adult, disease not mentioned.
Four, of a Billious Intermitting Fever. 1 of a Hychops. Puerperal Fever. 1 of Pulmonalis. One with the Rattles.
One, aged 17 years, of a Phthesis Pulmonalis. One, aged 67 years, of an Anascarea Debilium. One child, aged 2 years, of a Schoopula. Five infants, Crup and Convulsions.

above Register, are the Supervisors and Assessors for the several Districts in the County of Ontario. **William Shepherd.**

Sworn before me, one of the Justices of the Peace for the County of Ontario, this 29th day of January, 1800. } **James Ross.**

I consider this table, whatever others may do, as a matter of curiosity and interest also, inasmuch as it gives us the comparative mortality in the early settlement of the Genesee county, now—at least a good share of it—the most thrifty and densely-populated part of the State. Let us see—in January 1800, the whole population, exclusive of the native tribes, was 12,000, and the whole number of deaths in the compass of the year 1799 was only 84. Deducting 922, the number of inhabitants in these towns in which the number of deaths is not stated, from 12,000 and it leaves 11,278, which give us only one death to every 134·26 inhabitants, nearly—only 18 of idiopathic fever—not one in 500—making a pretty small ratio.* By the way, ten years previous to this, in 1790, there were only 1,075 inhabitants in the same territory, including also the present county of Steuben. The territory comprised in the county of Ontario, in 1800, and to which reference is had in "The Register," now consists of the following counties, viz: Ontario, Alleghany, Cattaraugus, Chatauque, Erie, Niagara, Genesee, Wyoming, Orleans, Monroe, Livingston, Yates, and about half or two-thirds of Wayne. These counties, including half of Wayne, contained, according to the United States Census, of 1850, a population of 574,234, making an average increase of 11,240 per year. The number of deaths in this territory during the year ending, June 1, 1850, were 7,277, making one death for every 78·5, nearly—a pretty long stride towards twice as many deaths for an equal number of inhabitants as 50 years previously, when the country was thought to be unhealthy.

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* If the Register intends to show that there were no deaths in the three towns in which none are mentioned, and which may be possible, then the ratio will be only one to 145 inhabitants, nearly.

PART SECOND.

CRITICAL ANALYSIS.

ART. X.—*The Pathology and Treatment of Stricture of the Urethra, both in the Male and Female, being the Treatise for which the Jacksonian Prize for the year* 1852 *was awarded by the College of Surgeons of England.* By HENRY THOMPSON, M.B. pp. 424, with plates. London: Churchill, 1854.

Traité Pratique des Retrécissements du Canal de l'Urètre par M. le Dr. F. Reybard. Ouvrage couronné par l'Académie impériale de médecine qui lui a decerné en 1852 *le grand prix d'Argenteuil* (12 *mille. Fr.*) pp. 600, with plates. Paris, 1853.

A Practical Treatise on Strictures of the Urethra. By Dr. F. REYBARD. To which the Argenteuil prize (12,000 francs) was awarded by the Royal Academy of Medicine (Paris) in 1852.

THE circumstances under which the volumes before us have been produced cannot but excite a favorable bias in the mind of the reader. The "Jacksonian" Prize Essays have been too long known to require any explanation at the present day, but the nature of the Argenteuil prize to many may not be so familiar. If we mistake not, this is the second treatise to which it has been awarded. In 1838, the Marquis d'Argenteuil left, by will, to the Royal Academy of Medicine, the sum of 30,000 francs, the accumulated revenue of which, every six years, was to be granted to the author of the most important improvement, introduced during that period in the treatment of the stricture of the urethra; or, no essay appearing upon the subject worthy the prize, it might be given to the author of the most important treatment of other diseases of the urinary organs. No less than twenty-seven competitors enlisted for the prize of 1844, and a commission, composed of MM. Jobert, Amussat, Villeneuve, Bèrard, Lagneau, Begin, Ségalas, Civiale and Jourdan, after devoting a year to the examination of the numerous memoirs presented, adjudged the prize to Dr. Leroy D'Etiolles. The adjudicators in the present instance were MM. Bouvier, Gerdy, Grisolle, Hugier, Larrey, Laugier, Ricord, Robert, and Roux but lately deceased.

Mr. Thompson devotes forty-eight pages, and M. Reybard forty-three pages, to the anatomy and physiology of the urethra. The microscope has settled the question as to the muscularity of the urethra, and demonstrated beyond dispute that throughout its whole course it is surrounded by muscular tissue of the involuntary kind, like that which enters into the structure of the bladder, air-tubes, and intestines. Mr. Thompson gives to Kölliker, of Würtzburg, the credit of first publishing the fact of their existence, though the contemporaneous microscopical investigations of Mr. Hancock, of the Charing Cross Hospital, as he himself admits, were made in total unconsciousness of those of of the German anatomist. It is a singular fact, of which we have been personally assured by Mr. Hancock, that the muscular fibres are most easily detected in the fœtus, for we should naturally expect that they would be most fully developed in the adult. We have not space to dwell upon this important discovery which explains many points connected with the pathology of strictures, but cannot too warmly recommend Mr. Hancock's small volume on "*Strictures of the Urethra*," published in 1852. As we have stated, Kölliker is entitled to priority in the *publication* of his discoveries, and the date of Mr. Hancock's first paper upon the subject is February, 1851. This was read before the Medical Society of London, and his Lettsomian lecture before the same body in 1852, which contains a fuller exposition of his views, was published in the "London Lancet" for February 21, 1852; and it is to be hoped, though it can by no means be regarded as probable, that the results of the investigations of Mr. Hancock and Kölliker may become known to the competitors for the Argenteuil prize of 1848! Sure we are, that we can find no trace of such knowledge in the treatise of M. Reybard. True, he infers the existence of muscularity in the urethra, from certain phenomena which occasionally occur during the introduction of a sound or catheter; but modern science rests not satisfied with *inferential* evidence, and in no point of view does Mr. Thompson's description of the anatomy and physiology of the urethra exhibit its superiority more strikingly than in the faithful account which he has given of our *actual* knowledge upon the subject. In this respect, M. Reybard falls immeasurably behind the English surgeon.

After a full examination of the proofs of the muscularity of the urethra, Mr. Thompson concludes:

1. That the entire urethral canal; or, at all events, the membranous and spongy portions of it, may be contracted in calibre or closed by approximation of its sides through the agency of muscular structures which surround it, in obedience to an effort of the will.

2. That contraction of the urethra may be the result of a purely reflex act, uncontrollable by the will, and of a character differing from that of the voluntary contractions before described as relating to micturition.

There is no proof, says Mr. Thompson, so good as personal experience; and whoever wishes to be furnished with a striking example of the reflex contractions which are wont to occur throughout the whole canal, need but introduce a catheter into his own urethra, when he will soon become conscious, especially during its removal, of the great contractile and expulsive force called into play by every portion of the canal. "It is an experiment worth the trying, and I hold that no man should attempt the passage of a catheter on the person of a patient, who has not first tried its effect upon himself." p. 33.

Chapter II. of Mr. Thompson's work is devoted to the "Classification and Pathology of Strictures of the Urethra." About forty pages are filled with the discussion of these topics. He thus expresses himself in relation to the existence of spasmodic stricture. "Examples of pure spasmodic stricture are, without doubt, very rare; still the influence of muscular action upon the urethra being very great, it is very important to recognize it in diseased conditions of the organ, since it commonly supervenes upon and complicates most of them. Indeed, neither organic nor inflammatory narrowing of the urethra can be well imagined to occur without the co-existence, at some time or another, of spasmodic action to some extent in the muscular tissues around." Under the terms *organic* and *permanent* strictures he includes all contractions of the urethra, which are the result of some appreciable organic alteration in the structure of the parts involved, excepting that which is due to, and concurrent with, an acute inflammation, capable of undergoing complete resolution, not necessarily followed by any *permanent* narrowing of the canal.

To those who would object to this classification, on the ground that *inflammation* is not admitted to rank among *organic* changes, he remarks: "The answer is sufficiently obvious. Our language does not furnish us with a single term embracing the co-existence of two ideas, both necessary to describe the class of lesions under consideration; the one of organic change, as contrasted with that we call functional; the other, that its especial character is permanency, *i.e.*, inability to bring about its own resolution and cure by the working of any naturally inherent power; this being the rule, beyond all question, with regard to the strictures now under consideration: it being further understood that the absolute impossibility of an exception is not affirmed."

"Acute inflammation narrows the canal for a time; but the great majority of inflammatory attacks under favorable circumstances leave the calibre of the canal as they found it. Acute inflammation, *per se*, is rarely a cause of *permanent* stricture; it is the subsequent persistence of the chronic form which is the great agent in its production. On these grounds, I should unquestionably be compelled on all occasions to use the two words, *organic* and *permanent* in combination, were it not conceived legitimate to employ either of them alone for the sake of brevity, having first stated that the other is always to be regarded as implied or understood."

The views of M. Reybard coincide with those of Mr. Thompson upon this point, and with him he excludes the inflammatory from the list of organic strictures. The latter form he defines as a permanent and progressive diminution of the diameter of the canal, produced by the gradual contraction of a morbid tissue which occupies a greater or less extent of the walls of the urethra, the immediate effect of which is more or less to obstruct the flow of the urine.

In view of the discrepancy of opinions as to the locality of stricture, after recording and analyzing "the statements of those whose authority is most to be relied upon," Mr. Thompson observes: "With one exception, all the authorities quoted nearly agree in one particular; viz., that stricture is most commonly found at the junction of the bulb with the membranous portion, or within a short distance of it, in either an anterior or posterior direction. My own examination has included a very large number (not less than three hundred) of cases. . . . These observations lead me to coincide, beyond all doubt, with the opinions just quoted, which assign the first place, in relation to frequency of occurrence, to the stricture which occurs at the posterior limit of the spongy portion of the urethra."

He asserts that no case of stricture in the prostatic portion of the urethra is to be found in any of the public museums of London, Edinburgh, or Paris, and that the evidence of their existence would appear to rest solely on the observations of MM. Leroy d'Etiolles and Ricord. Its excessive rarity, to say the least, he considers as demonstrated.

M. Reybard, after referring to cases observed by Sir Everard Home, Sir Charles Bell, Sir Astley Cooper, and Lallemand, remarks, (p. 1540 that he has himself seen a case which was caused by suppuration in the prostate, and an abscess which opened in the rectum.

Chapter III. of Mr. Thompson's work, embraces the consideration of the symptoms and pathological effects of organic stricture. Of the fifteen pages devoted to this subject, we can only extract the following: "The earliest symptom usually noticed by the patient is a little gleety discharge, almost constantly present in greater or less quantity. Some uneasiness is felt, or it may be occasional pricking pain in some part of the course of the urethra, or a little smarting when the urine passes over it in micturition, but varying in intensity.

"The stream is somewhat altered in form, not having the full rounded character of health, but more or less flattened; it may be twisted, spirting, forked, or even divided, which conditions are caused by the current of water being insufficient in size and force to dilate and extend the lips of the meatus externus, so that the fissure-like form of that opening modifies the stream; and if its momentum be insufficient to separate each lip from the other, the urine issues above and below, so that two small streams are produced instead of one.

"Many persons, from a tumid condition of the meatus alone, habitually pass such an one, hence it must not be concluded that the existence of such a stream is, *per se*, a proof that stricture exists."

We cannot dwell upon his description of the *local* symptoms of stricture, nor the sympathetic disorders to which this affection may give rise. We quote the following remarks in reference to neuralgic pains which sometimes co-exist with the disorder: "Pains, apparently unconnected in any way with the seat of the disorder, are occasionally found to be co-existent with stricture; thus, pain in the sole of the foot, long complained of, may be referred sometimes to this cause, and has even led to the discovery of the urethral lesion. Neuralgic affections of the thighs, and of other parts of the body, sometimes appear to have a similar connection with it. I have known such to be treated for a long period without success, until the calibre of the urethra being restored, they have simultaneously disappeared."

Mr. Thompson's observations, under the head of the pathological effects of stricture, are far more extensive than those of the French author, who alludes but briefly to the class of sympathetic affections to which we have just referred.

Causes.—Passing over the agency of other causes which have been accused of producing stricture, we find Mr. Thompson thus expressing himself as to the influence of gonorrhœa: "It is the prolonged existence of a sub-acute inflammation in the median and posterior parts of the canal, which, as a sequence of gonorrhœa, rather than the primary disease itself, causes the exudation of that deposit in and beneath the mucous membrane, which, by its subsequent contraction, so commonly produces stricture."

Among the traumatic causes, M. Reybard asserts, that from experiments instituted by himself, he is authorised in stating that circular divisions of the urethra, and perpendicular to its axis, invariably give rise to organic strictures, but longitudinal wounds, on the contrary, are far from producing this result. For this reason, he believes, that the button-hole incision, and other proceedings of urethrotomy, are wrongly accused of themselves leading to a contraction of the canal. We shall have occasion to refer to this matter again in speaking of Professor Syme's operation, for certain forms of stricture.

Diagnosis.—Mr. Thompson devotes more than twenty pages to the consideration of the nature of those strictures which are only of transient duration, but we must proceed to the more practical part of the subject, viz., the diagnosis and treatment of stricture. A positive diagnosis can, of course, be established only by the passage of an instrument along the urethra, and of all the various forms recommended for this purpose, Mr. Thompson gives his preference to the inflexible and solid. He is accustomed to employ a curved, solid, silver sound, or, what is much cheaper and almost equally useful, a well-polished steel one, and silver-plated, the chief advantage of the silver being that it permits slight alteration to be made in its form, for special cases, without sustaining injury. A proper curve should be given to it. Those usually found at the makers, describe, as nearly as possible, arcs of circles, varying from four to four and a half inches in diameter, and, what is worse, in some cases, the last inch of the sound is scarcely flexed at all, but forms a straight line at the end of the curve. An instrument of this shape is totally unfitted to traverse the urethra with ease and safety. "Were it necessary to construct a sound or catheter upon *à priori* principles, we should naturally, as it appears to me, adapt its curve to that of the least movable portion of the urethra itself. In the anatomical part of this work, this was shown to be equal to a portion of the circumferential line, equal to about three-tenths of a circle three inches and a quarter in diameter."

Mr. Thompson gives us many useful hints in reference to the construction of catheters, and illustrations are added to make his views more intelligible. But our space will not permit us to dwell upon these topics, and we proceed in the next place to consider the treatment of stricture.

Treatment.—Here we have two indications: first, to restore the natural calibre of the canal; and, secondly, to maintain this condition of the canal. The means employed may be included under the heads of dilatation, chemical agency, and incision. Dilatation is accomplished by bougies of wax, plaster, catgut, softened ivory, gum elastic, or of metal, and the latter may be either flexible or inflexible. In addition to solid cylindrical instruments, we have those of a hollow form, such as catheters, tubes made to slide one over another, like those invented by Mr. Wakley, or dilating instruments like those devised by M. Perreve, and improved by Mr. Barnard Holt, of the Westminster Hospital, London. Then, there are the flaccid tubes, which may be distended, as proposed by Mr. Arnott, with air or water. The question of force in the use of dilatation is thus disposed of by Mr. Thompson:

"*First.*—When any degree of force is required, it may only be made *after the point of the instrument has well and fully entered the stricture*, so that the operator is assured that it is in the right track. Force is never to be employed in order to *make a way into it.*

Secondly.—It is then to be increased very gradually, first trying one uniform rate of forcible pressure for two or three minutes before proceeding to increase it, and when it is found necessary to do so, the increase must be continued in the same manner for a similar length of time. It is not to be accomplished by pressing onwards with more and more violence until something gives way. This is never legitimate.

Thirdly.—Complete knowledge of the anatomy of the passage, some acquaintance with its diseased conditions, also, and long experience in the use of instruments in it, are the indispensable qualifications of the operator, to whom the use of force is permitted."

Forced dilatation finds but little favor with M. Reybard. He admits, however, that it may sometimes be used with advantage, as employed by Mayor, after the obstruction has been, to a certain extent, overcome, by dilatation or urethrotomy.

Rapid dilatation has been highly eulogised by Lallemand, MM. Chrêtien, Pirondi, Velpeau, and Benique. Professor Eve, of Nashville, published in the Nashville *Journal of Medicine and Surgery*, for June, 1853, a memoir on the treatment of stricture of the urethra, in which he warmly advocates this method. The views of Mr. Thompson may be ascertained by the following extract:

"Great mischief may very easily be done by rapid dilatation on any method, a proceeding, the exercise of which, has been sufficiently reprobated. The semi-elastic constituents of a stricture must be gradually dilated, if an efficient result is to be attained. Inflammation of the urethra and bladder, which, in patients laboring under chronic disease of the kidneys, may readily extend to these organs and be followed by fatal consequences, has been not unfrequently induced by neglecting this rule."

Even slight lesions of the urethra may give rise to phlebitis, or purulent infection. Mr. Coulson, of St. Mary's Hospital, London, has reported in the London *Lancet*, 1852, vol. 1, p. 562, twelve cases in which such results were produced by laceration following the use of sounds and lithotrites. In four of these cases, dilatation was employed for the removal of organic stricture. Mr. Thompson states that he has witnessed two cases of a similar nature, and he remarks that it is an instructive fact in almost all of these examples, the effects in question have followed efforts to dilate the urethra, which have been carried to a considerable extent.

Mr. T. remarks that he should "infinitely prefer a plain sound" to the instruments recommended by M. Perreve, Mr. Barnard Holt, and Mr. Wakley, as it is manifest that in very narrow strictures they cannot be rendered available. Professor Gross, in his admirable treatise on the urinary organs, states that he is satisfied from ample experience that the very best instrument for dilating a stricture, is the common silver catheter, with a slightly conical point. Mr. Fergusson, of King's College Hospital, gives the preference to the bougie and generally employs the plated steel rod, or a silver tube. Sir Benjamin Brodie employs the common plaster bougie, as well as those made of solid silver. Sometimes he uses the gum catheter, which he allows to remain day and night. This gives rise to suppuration, after which a large sized instrument may be introduced. Mr. Syme employs a hollow instrument, made of Berlin silver, which he asserts, possesses the requisite degree of rigidity, takes a fine polish, and is not liable to rust. Mr. Guthrie prefers a pliable hollow gum elastic bougie of a medium size, perfectly smooth, and tolerably round at the point, so as to give as little uneasiness as possible. Some thirty years ago, he had a dilating instrument made by Mr. Weiss, which, in the language of Hunter, was to act "like a wedge upon inanimate matter." At first, it consisted of three blades, which were gradually separated by the action of a screw which turned in the handle, and the same mechanism was afterwards applied to a two-bladed instrument. In his work on the *Urinary Organs*, Am. Ed., 1845, p. 76 he remarks: "I thought I had now obtained an instrument which could not fail of fulfilling all my expectations, and was only disappointed by finding that it did too much. The opportunity of dilating was in general too tempting to be resisted, and the consequence was, that it produced irritation in so many cases, that I was forced to give it up, having also fully satisfied myself that dilatation, to whatever extent it might be carried, could not cure the worst kinds of stricture."

In concluding his remarks upon this subject, Mr. Thompson observes, that there are some cases of stricture in which the effects of dilatation are so temporary, that its claim to be regarded as a cure may justly be questioned. "The contraction re-appears, and that so rapidly, that in order to maintain a canal sufficiently patent for the performance of its functions, an instrument must be passed every other day, or even oftener, and thus the patient is subjected to perpetual treatment, and to the confinement and conditions of dependence consequent thereupon."

In other cases the sensitive condition of the urethra renders the introduction of sounds or bougies intolerable, and if employed, they aggravate the condition of the patient.

In reference to the employment of chemical agents in the treatment of stricture, after describing the different instruments employed for the purpose, Mr. T. concludes that these agents should never be resorted to for the sake of their escharotic or caustic powers, properly speaking. He admits that the nitrate of silver, lightly applied, exerts a salutary influence on the diseased surface of the urethra, as it does in cases of inordinate irritability, and undue vascularity of the skin and mucous membranes in other parts of the body, and it may thus become a useful adjunct to dilatation. The potassa fusa being more active, is consequently more dangerous, and, if used at all, it should be only in very minute quantities, "such as fractional parts of a grain," inasmuch as its action is with difficulty controlled. By dissolving some of the component tissues of a stricture, caustics may materially aid us in effecting dilatation. Mr. Reybard is a decided opponent of their use, asserting that they are liable to be followed by dangerous consequences, or to give rise to more dangerous contractions of the canal than those which they are intended to destroy. His experiments upon animals have led him to the conclusion that even the subsequent employment of bougies will not prevent this retractile cicatrization of the canal.

Incisions.—Here we have two methods, external and internal incisions. The history of these methods is given in detail by Mr. Thompson and M. Reybard. All the various instruments employed for internal incisions, Mr. T. remarks, are liable to the strong objections that the operator has no means of *seeing* how far, or what he cuts. "Hence, I feel bound, unhesitatingly to discountenance the use of all curved instruments constructed on this principle, and if it ever be necessary to apply a 'lancetted stilett' without a guide, (which I have never had occasion to do,) its employment should certainly be limited to that part of the urethra which is quite movable, and where its direction can be controlled somewhat by the assistance of the hand not employed in directing the instrument. Less dangerous is it, as we shall hereafter see, to lay open the perineum and divide the stricture from without, thus giving free vent to noxious fluids of all kinds, than to wound the urethra from within, at or behind the bulb, as we run great risk of doing, when operating at six inches distance from the external meatus, and thus only make a channel for these matters into the erectile cavities and other structures around."

M. Reybard recommends a peculiar form of urethrotome invented by himself. The blade of this instrument is large, and its point is directed *towards* the orifice of the urethra. With this he incises the whole thickness of the walls of the urethra, at the seat of stricture. The margins are to be separated so that they may cicatrize at a distance from each other. The intermediate cicatrix resulting, he asserts, increases the diameter of the canal, and gives to it a new and permanent calibre. A period of twenty-five or thirty days is required for the cicatrization, and during this time a dilating instrument must be daily passed.

Of this method Mr. Thompson observes: "I cannot forbear expressing a conviction that the adoption of a proposal to make such extensive intra-urethral incisions, endorsed, as it nevertheless is, by the high authority named, will not be found an improvement upon the modes of treatment which are adopted on this side the channel."

The following, according to Mr. T., are the indications for the employment of intra-urethral section. 1st. When dilatation has been sufficiently tried and does not afford relief, or that which is temporary only in its duration, (and the stricture is not of an irritable character, in which case, as we have seen, a trial of the caustic may first be made); 2d. And the stricture is known to consist of a mere fold of membrane, or, at all events, is a short one, i. e., of small extent from before backwards; 3rd. When this is situated in the anterior three or four inches of the urethra, the case is one which most probably will be successfully treated by division, according to the modes already recommended, the choice of which should be determined by rules already given.

External Incision.—In the chapter devoted to this subject, Mr. Thompson reviews the evidence which we now possess in favor of

Professor Syme's celebrated operation, or as it has been called "the perineal section." In a former number of this journal (January, 1852, pp. 128–29), we had occasion to comment upon the extraordinary character of the discussions to which this question had given rise. It would seem that the Edinburgh Professor has somewhat modified his views as to the non-existence of *impermeable strictures* which he at one time so strenuously maintained. In the *Monthly Journal*, for June, 1851, he writes: "As to the question of 'impermeability' I simply maintain, that if the urine passes out, instruments may always, through care and perseverance, be got in beyond the contraction. It should be observed that the case here is quite different from that of a distended bladder requiring *immediate* relief. I have never maintained that in such circumstances the introduction of a catheter was always practicable." Patients, therefore, who may now wish to go from London to Edinburgh to consult the skillful Professor, will be compelled to defray their own expenses, his own liberal offer being of course no longer binding! Though he professes to have "*la main d'une adresse et d'une légèreté sans égale*,"* we have every reason to believe that, like the late Mr. Liston, he has at length been foiled in the introduction of the catheter, a circumstance which many have not hesitated to predict. Professor Syme makes *permeability* an indispensable pre-requisite to the performance of external division. How would he treat that class of which he has been so reluctant to admit the existence, viz., the impermeable strictures? But to return to the "perineal section." Mr. Thompson remarks that so far as he has been able to learn, this operation has been performed about 115 or 120 times. He then proceeds to discuss the questions, what amount of danger attends its performance, and how far is it entitled to be considered as a means of cure? The principal dangers are pyohœmia, hæmorrhage, and urinary infiltration. Besides these, there are what Mr. Syme designates as "*nervous*" symptoms, in which he considers the danger more apparent than real. In the *Monthly Journal*, November, 1852, Mr. Syme employed the following language: "Having now employed the operation in nearly seventy cases without a single instance of hæmorrhage or death, I feel entitled to say that the procedure is free from danger when properly executed."

Mr. Thompson states that of 113 operations of which he has the details, four proved fatal. The cause of death in all was pyohœmia. But, if hæmorrhage has not yet caused death, it has occasionally been of an alarming character. This, however, Mr. Thompson asserts is not the necessary result of the operation, and cannot in fairness be charged to it. It may be avoided by attending to the cardinal point of the operation, viz., *to cut in the median line.*

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* Rousseau's eulogy of Frère Come, in *Confessions*, tome 3, 2d ed., p. 144

Urinary infiltration is to be guarded against by avoiding the deep fascia, which according to Mr. Syme, is always practicable.

How far is the operation entitled to be considered as a means of cure? It must be remembered that it is principally performed in very obstinate, extensive, and irritable strictures, in which dilatation, cauterization, and internal division prove of no avail. In reference to this question, Mr. Thompson observes:

"There are three results which may arise from this operation:—It may fail to afford any relief:

"It may cure for a short period, and afterwards be followed by a relapse:

"It may effect a permanent cure."

In view of all the evidence before him, Mr. Thompson is inclined to believe that a large proportion of cases must be assigned to the third category, viz.: those for whom the proceeding has effected a permanent cure. He enters into an examination of the causes of the invariable success which has followed the operation in Mr. Syme's hands, and attributes the fatal results in the practice of other surgeons to the fact that they have not rigidly adhered to his directions. We regret that we have not the space to notice more fully the many instructive observations of Mr. Thompson in reference to this operation, but we can only refer the reader to the volume itself, assuring them, that they cannot but be profited by its perusal. We must also pass over chapters X., XI., and XII., which treat of urinary abscess and fistula; retention of urine, depending on stricture; and stricture of the female urethra. The work concludes with an appendix, which is devoted to the examination of urine for clinical purposes, chiefly in connection with the subject of difficult micturition, and a report of cases, to which reference is made in the work. There is also an appendix to M. Reybard's volume, containing the reports of some 36 cases; illustrating the views and practice of the author, as inculcated in the text. Woodcuts have been added to each of the volumes before us, whenever it seemed necessary to render the description of any particular form of instrument more intelligible, and no efforts have been spared by either the French or English author to produce a work worthy of the prize, for which they were competitors. Were we to decide upon the merits of the work, according to the amount of the awards adjudicated, that of Mr. Reybard would stand first upon the list, but we feel satisfied that such will not be the opinions of those, who impartially examine them. Indeed, we know of no volume that can be compared with the very elaborate treatise of Mr. Thompson; containing, as we think it does, all that is at present known upon the subject. It will doubtless be re-published in our country. G. C. B.

Art. XI.—*Pneumonia: Its supposed Connection, Pathological, and Etiological, with Autumnal Fevers; Including an Inquiry into the Existence and Morbid Agency of Malaria.* By R. La Roche, M.D. Member of the American Philosophical Society; of the American Medical Association; Fellow of the College of Physicians, etc., etc. Philadelphia: Blanchard and Lea, 1854. 8vo. pp. 502.

It is well known that by many intelligent physicians in our southern and western states, pneumonia and all catarrhal affections are believed to be dependent upon the same specific cause which induces malarious fever. This etiological identity in these apparently distinct classes of disease, it is contended may not only be logically inferred, but actually demonstrated. A very large class of physicians practicing in the south and west, believe with the lamented Forry, that in a large proportion of the pneumonias occurring in the malarious districts, there appears to be, at least, a close alliance, if not a common origin, with intermittents; and recently there have appeared some very positive assertions of their entire etiological identity.

Prof. A. P. Merrill, of Memphis, in a recent essay on pneumonia, boldly maintains this view, and brings forward an array of facts, which to some minds may seem ample demonstration of the theory in question. Dr. H. A. Ramsey, of Geo., has also advanced similar views, in an essay on pneumonia, published in 1851. But all who are familiar with the medical literature of the last century must have remarked the very frequent recurrence of the same theory in the history of medical opinion. Cleghorn, Sydenham, Huxham, and Bailly clearly taught this doctrine of the widely-acting effects of malaria; and our own Rush, in his hypothesis of the unity of disease, practically taught the same doctrine. Macculloch, Copland and many other writers of note, have also very distinctly asserted the etiological identity of the forms of disease under consideration; and so popular has this theory become in some sections of this country, that the specific treatment for malarious affections has too often been a fatal treatment of inflammation of the lungs. To check the progress of a loose medical philosophy, which has already manifested some dangerous tendencies, and for the equally laudible purpose of presenting to the profession a *resumé* of medical facts and opinions relating to the origin, nature, and effects of malaria, the accomplished author of the volume before us, has undertaken and completed a task for which medical men in all parts of the world may be grateful. Dr. La Roche, in this work, has fully established his long-accredited reputation as an accomplished scholar, of vast erudition in the general literature of our profession, and as a man of discriminating and logical judgment. Whatever some persons may think of the opinions of our author, it certainly is no small merit of his book that the vast collection of facts that it contains, are so arranged and stated that they cannot possibly mislead the reader or be made to teach a false philosophy.

The first 300 pages of the work are devoted to the consideration of what may be termed the natural history of malaria. Chapter 1st., however, is occupied with the statement of facts arranged under the following heads:—1. *Belief in the connection of pneumonia with autumnal fevers long entertained.* 2. *Pneumonia common where fevers seldom or never are seen.* 3. *Pneumonia not necessarily prevalent where fevers are common.* 4. *The two diseases prevail in different seasons.* 5. *They appear under the influence of opposite winds.* 6. *Pneumonia is of yearly occurrence—not always so fevers.* 7. *Their altitudinal range is not the same.* 8. *Fevers influenced by nature of soil—not so pneumonia.* 9. *Fevers arrested by frost—not so pneumonia.*

In the last 3 chapters of the work, the author enters upon a careful and extended comparison of the etiological, anatomical, symptomatic and pathological facts and events, which are respectively characteristic of the diseases in question.

The retrospect of medical opinions embodied in the first chapter, is exceedingly interesting, and it certainly serves as a sufficient apology for the goodly volume, to which it has given origin. After a very full and fair statement of the opinions of those who believe in the etiological identity of pneumonia and malarious fevers. Dr. La Roche, remarks:

"The reader will easily perceive that, before the advocates of the identity of the two diseases can successfully sustain the position they have assumed, it will be necessary for them to show that autumnal fevers and pneumonia are produced by the same causes; that they prevail in the same places, and during the same seasons of the year; that their existence and diffusion are promoted by the same agencies; that they are arrested by similar means; that they exercise their effects on the same classes of individuals; that they present similar or kindred symptoms; that they affect the same organs, and produce the same or analogous changes in the fluids and solids; that they are governed by the same laws; and that they present other points of approximation invariably found to be possessed by diseases, between which there exists the close connection claimed in the instance before us. Unless they can succeed in attaining these objects, their opinion must fall, and the independence of those diseases be admitted. It becomes necessary, therefore, to take up each of these subjects separately, and to ascertain how far they may be appealed to in respect to the question at issue.

As we have seen, it is admitted that pneumonia is sometimes an idiopathic affection, caused, of course, in such cases, by atmospheric vicissitudes, or other kindred morbid influences, and unconnected with any complaint except ordinary phlegmasiæ. But, while admitting that much, it is contended that, in the majority of instances, the disease must be referred to a different origin, and viewed as simply symptomatic; that is, a mere form of another complaint, and would not, it may be presumed, exist if the causes of the latter, whatever they may be, did not exercise their baneful influence. It is suggested that the combination of phenomena, which impressed the common observer, that he beheld a special and independent complaint, was fallacious—really nothing more than a cloak, serving to disguise a disease which in its natural state, assumes a different dress; and that, while with infantile simplicity, we fancied we had before us a disease of well known pathological character; it turns out that we were dealing with one of a totally different kind, in which the affection of the lungs constituted an accidental and unessential element.

All this may prove acceptable in certain quarters; it may be regarded as plausible by some, or even as well founded and perfectly unanswerable. But so far as I am concerned, I have no hesitation in stating, as the result of my personal observations, aided by extensive inquiry and close reflection, that pneumonia is not *sometimes*, but *always* an idiopathic disease, whether it occurs sporadically or epidemically; and that it is due to causes perfectly distinct from those to which such fevers (malarious) owe their origin. I believe this; and believe besides, that even were pneumonia produced at times by the legitimate causes of fevers, such cases would not be any more symptomatic than those that are due to the ordinary causes of the disease; for these do not act directly and primarily on the lungs any more than others would do, supposing them capable of giving rise to the effect in question."

Dr. La Roche, thus very clearly announces his opinions concerning the etiological and pathological distinctness of pneumonia, etc., from the autumnal fevers with which it is so often unhappily associated in malarious districts. To those physicians who have seen pneumonia only as it occurs in our Northern States, our author's conclusions on this subject may appear very natural, as well as practically safe; but among those who have had experience in treating the pneumonias of our Southwestern States, there are many and highly respectable practitioners who will dissent from the positions taken by Dr. La Roche. But our author has proved himself fully qualified for the discussion of his subject, and being no partizan, and manifestly having no other object in view, than the elucidation of highly important and practical pathological principles, all of his statements of fact are characterized by a completeness and fairness that is most gratifying; while the careful and logical arrangement of his argument is such as to carry conviction to the minds of most of his readers.

We have already mentioned the heads of the argument included in the first chapter, which embodies a remarkably complete bibliography of ancient as well as modern literature relating to the points under discussion. Of authors quoted and works referred to under these heads, are nearly three hundred names of the highest authority; and, if in this chapter it is not clearly demonstrated that "pneumonia is *always* an idiopathic disease," it is, at least, satisfactorily proven that if under any circumstances inflammatory affections of the lungs may be of zymotic origin, they necessarily depend upon some other climatic or meteoric agencies than those which are concerned in the production of periodic fevers.

Dr. La Roche is a firm believer in the doctrine of a specific *miasma* as the cause of all climatorial fevers; and to set at rest, so far as may be, all doubt upon this vexed question, he enters upon an extended and extremely thorough examination of the subject of the *Existence and Morbid Agency of Malaria.* The various theories which have recently been proposed, such as high dew-point, vicissitudes of temperature, terrestrial radiation, modifications of the normal electrical conditions of the atmosphere, etc., he has very properly declined to discuss except in an incidental way. After reading Dr. La Roche's treatise we are more fully satisfied than ever before, that neither one, nor all of the hypotheses just mentioned can sufficiently satisfy the conditions, etiological and pathological, of the periodic fevers, to be permitted to take the place of the old and firmly established theory of a special miasma. This theory though now venerable with age, must, we think, continue to take the precedence of all others on this subject, until further researches in organic and iatro chemistry shall reveal to us the exact nature of this now mysterious zymotic agency or atmospheric condition, which is everywhere admitted to be the proximate cause of intermittents. And the hope that such a discovery may ere long be made is certainly not preposterous. Already the discovery of the principle of allotropism, and especially of that allotropic state of oxygen, discovered by Schönbein, and by him denominated *ozone*, indicates the direction in which such iatro-chemical investigations may be most hopefully directed. We have already remarked that Dr. La Roche has entered upon a very full and satisfactory investigation, and account of the natural history of malaria. It would be impossible in this place to give any thing like a complete analysis of these deeply interesting chapters of his book. It is perhaps sufficient to say that they embody a far greater amount of facts on this topic, than can be found elsewhere in any ten other treatises on the subjects in question; and besides, the merit and value of the work are immeasureably enhanced by the very logical arrangement and classification of this vast aggregation of widely-gleaned facts.

Those facts which relate to the existence, nature and morbid agency of malaria are arranged under fifty-seven separate heads, and those which relate to points of comparison between the etiology of pneumonia and miasmatic fevers are included under nearly half that number of classes, and constitute the last three chapters of the volume.

We will make a few quotations from several of these classes, in which some points of great practical importance are happily elucidated:

Fever not due to the action of any known gases:

* * * Few, also, who have reflected seriously on the subject will feel disposed to lend a willing ear to the theory which teaches that the cause of fever must be sought in the admixture, in minute or larger proportion, of sundry gases, with or without addition of other substances—carbonated hydrogen, carbonic acid gas, ammoniacal gas, hydrosulphuric acid gas, phosphuretted hydrogen, etc.; for were it true that these gases have been, or may be detected in the atmosphere of sickly localities it would not follow that we must ascribe fever to their agency, seeing that though often unpleasant to the smell and sometimes injurious or even fatal in their tendencies, they do not produce phenomena analogous to those of the diseases in question, even when absorbed in large quantities, while those they do occasion present always a widely different garb, and that, as they do not produce the symptoms of true pyrexial complaints when absorbed in large quantities, they are not likely to produce them when received in such small proportion as to elude detection."

After examining the various doctrines and statements to which the hypothesis in question has given rise, our author concludes that "there is not the most distant probability that malaria will ever be found to owe its morbific agency to, or consist in any extraneous gas floating in the atmosphere, or, that fevers are due to an excess or deficiency of one or more of the known constituents of the latter.

Nature and condition of fever localities lead to the opinion of the existence of Malaria.

The danger of an attack of fever increased in proportion to proximity to such localities.

If we approach to, or remain some length of time—occasionally only a few hours or moments—in those localities, or in their immediate vicinity, we are stricken down with fever; if we avoid them, we escape. The South Carolinian gives up his plantation residence in summer, removes to Charleston, or to the mountains, where he is safe from the country fever. Let him visit his estate before the advent of frost, and especially, let him sleep there, and he runs great risk of an attack. In yellow fever seasons, strangers must leave, or abstain from entering the city; if they venture into it, they will in all probability have the disease. With us, in Philadelphia—as with the residents of other cities of the middle and neighboring States, and of some parts of Europe—where infected districts are of limited extent, the disease is restricted to individuals who venture within the bounds of these. At a very few paces from the sickly spot to which they penetrated, and where they doubtless imbibed the seeds of the fever; people move about, business is transacted with perfect impunity, and everything often looks precisely as if the city were not the seat of an epidemic.

These effects are not due to heat alone.

Under this head, Dr. La Roche adduces an array of the most interesting facts, and most successfully controverts the doctrine taught by Tommasini and Hosack. In this connection, honorable mention is made of the very valuable and philosophical report made to the Smithsonian Institute last year, by Lorin Blodget, Esq.; and first published in this journal (N. Y. Jour. Med. vol. xi. p. 313). The following are the conclusions of Dr. La Roche upon this subject:—

Heat may be, and is, to a certain extent, requisite to promote the formation of other agencies; it is doubtless, essential to further the evolution of the poison which gives rise to the disease, as everything connected with the latter proves—its production in hot weather, its absence in cold, and its disappearance on the accession of frost. Heat may act besides, as an exciting cause, but alone, it cannot occasion the peculiar form of fever under consideration. It requires materials to act upon, and from which, aided by other influences, it may extricate an efficient cause."

A very lengthy chapter is devoted to the detail of facts which have been observed in the medical topography of malarious districts in our own and other countries, and the argument derived therefrom, is as complete as could be desired. Apart from the relevancy of these carefully compiled facts to the author's argument, they constitute in their present condensed and convenient arrangement, a very valuable addition to this branch of our professional literature.

In the closing sections of the fourth chapter, Dr. La Roche undertakes, and, we think, very successfully, to answer the principal objections which have been urged against the theory of a special miasma. Admitting, and, indirectly, very satisfactorily demonstrating, the doctrine proposed by Prof. Dickson, of the blending of the types of fever, and the not less important doctrine taught by Prof. J. M. Smith, of this city, after Lancisi, Littré, and Twining,—of the diversity, composition, and permutation of miasms, the leading objections to the doctrine of a special malarious cause of periodic fevers are fully disposed of; and no physician who has attentively studied the history of fevers in the United States, will dispute the positions assumed by the learned professors, whose names we have mentioned above.

In concluding his argument on the subject of malaria, Dr. La Roche remarks as follows:—

> Now, as has been said before, when we find the cause of fever requiring for its development the action of the very agencies which are necessary to insure the development of the gaseous products of decomposition; when we find that without these agencies, applied in certain proportions, neither those gaseous products, nor the efficient cause of fever will manifest themselves; that in all instances in which the latter is produced, as shown by the occurrence of fever, materials capable, when acted upon by the agencies in question, of giving rise to the evolvement of the gaseous products of decomposition—organic matter in various conditions and states of modification—exists; that total absence of those materials, whatsoever be the degree of heat, and of terrestrial and atmospheric moisture, carries along with it an equal absence of fever; and that, when once formed, the gaseous products of decomposition, as well as the fibrific cause, are cut short by frost or intense heat, and the process by which they were generated, arrested;—when, I repeat, all these circumstances are borne in mind, we can have no reason to doubt the propriety of admitting that the febrile cause presents a close analogy to the above-mentioned gaseous products; and that if in regard to the latter, heat, humidity, and other agencies acting in given proportions, and in concert on dead organic matter, give rise to certain products which assume the gaseous form; and if the process of the generation of these, and their existence in the atmosphere is destroyed by frost, or intense heat, the febrile poison which requires for its generation the action of the same agencies, as also, the existence of a kindred matter, and is besides arrested in its formation, and destroyed, when formed in the way mentioned, must necessarily consist of some modification of a similar kind of gaseous substance; in other words, that autumnal fevers must be the offspring of a malarial morbid poison, and not the effect of modifications in the sensible qualities of the atmosphere.

This is certainly a very logical and safe conclusion, yet it is by no means necessary that we should assert that the miasmata actually consist of new and separate gaseous substances, for we conceive it perfectly profitable, and, for many reasons, highly probable, that the organic gases of decomposition, to which our author here refers, may in conjunction with the causes which induced the decomposition and the gaseous emanation, induce in one or more of the elements of the atmosphere of such malarious locality, or in some of the elements of the living body, a condition analogous to the *allotropism* of which many of the elementary constituents of matter are known to be susceptible. And if future researches in physiological chemistry should demonstrate such a doctrine, it would certainly answer all the conditions and all actual characteristics accredited to a special and substantive miasma; but until more can be known on this subject we are content to believe in the doctrine so ably defended and elucidated by the learned author of the treatise before us.

We come now to the points of comparison in the etiological, symptomatic, and pathological history of the two classes of disease under consideration. Dr. LaRoche here fortifies his positions with impregnable facts: It is clearly proven that the proximate causes of the two classes of disease are widely different; that autumnal fevers are localized in certain places; not so pneumonia; that the diseases differ widely in symptoms and anatomical characters, and that their distinctive symptoms and pathological characteristics are still more widely at variance; that they differ widely as regards their respective modes and periods of incubation; that the susceptibility to pneumonia is never exhausted by repeated attacks; that the power of acclimatization does not extend to pneumonia; that pneumonia autumnal fevers are not convertible diseases; and by many collateral evidences, it is demonstrated that these diseases are and must be essentially and under all circumstances dependent upon entirely distinct proximate causes, however indirectly certain pneumonias may depend upon the malarious poison. In his closing chapter our author takes up the consideration of those combinations of autumnal fevers and pneumonia which are so common in malarious districts, and shows that such cases must not be considered as *peculiar* forms of either.

But we have already exceeded the limits prescribed for the examination of this excellent treatise; we cannot however forbear making the following quotation from the author's closing remarks:—He says,

> "Those who raise such an outcry about the necessity of facts, and reprove the most authoritative writers and teachers for a supposed adherence to preconceived notions, and a neglect of the true principles of the inductive philosophy, should first satisfy the profession, not only that they are less liable to error than their opponents, in drawing deductions from the facts that may happen to collect, but that these facts have been examined in a way calculated to secure advantageous

results. They should remember that, great as the number of useless theories may be, it sinks into insignificance when compared with the amount of incomplete facts which float around us. To observe accurately—to seize the important and useful points in the case examined—to discover its true bearing to other cases, its exact analogy to, or dissimilarity from them—to ascertain its dependence or independence of surrounding influences—to point out accurately the morbid agencies which have produced it, and to ascend by an analysis of its symptoms and anatomical characters, to its pathological nature and therapeutical indications, require a degree of skill, a tact, a habit of close observation that are not easily acquired, as well as opportunities for investigation that do not fall to the lot of every one.

We have finished our reading of Dr. La Roche's treatise with feelings of sincere gratitude to its learned author for the lasting benefit he has conferred upon our profession in thus collecting and arranging a vast and connected series of medical facts which never before have been so thoroughly analyzed or so perfectly classified—a labor which few medical men have the means or the ability of doing for themselves; and we think that all lovers of medical science must unanimously express their earnest desire that from the same rich storehouse and the same graceful pen which have given us this goodly volume, other works of equal value should speedily be issued, as we feel assured they may, without exhausting the accomplished author's resources. E. H.

ART. XII.—*Annual Report of the City Inspector of the City of New York, for the year* 1853. New York: McSpedon & Baker, Printers to the Common Council, 1854.

THE large amount of important matter which this Report and its tables contain, and the perspicuity and conciseness of arrangement, reflect creditably on the industry and fidelity of the City Inspector, and this annual document, a few years since almost valueless, is now highly interesting and instructive to those interested in vital statistics.

The total number of interments during the past year, was 22,702; of these 1,576 were stillborn, and 355 born prematurely; 97 died of malformation, and 175 of old age; 12,230 were males, leaving 10,472 females. The monthly mortality was greatest in August, next in July, and least in April, May, and November.

The number of foreigners who died during the year, 7,104; or over 31 per cent of the total mortality. Of these 4,247 were Irish, 1,576 Germans, and 538 English.

The diseases which proved most fatal during the year, were as follows:—

	Deaths.		Deaths.		Deaths.
Consumption,	2739	Cholera Infantum,	922	Marasmus,	1156
Dropsy in head,	903	Inflammation of Lungs,	1067	Dysentery.	763
Diarrhœa,	689	Croup,	673	Small Pox,	656

The following table gives the monthly mortality from these diseases:

	Jan.	Feb.	March.	April.	May.	June.
Consumpton,.............	247	220	248	228	217	209
Marasmus,...............	45	43	57	62	55	70
Inflammation of Lungs,...	109	94	140	113	81	86
Cholera Infantum,........	2	2	2	2	10	117
Dropsy in Head,..........	57	90	90	65	54	29
Dysentery,...............	18	21	19	19	20	54
Diarrhœa,................	12	16	8	18	18	68
Croup,...................	63	58	70	55	49	42
Small Pox,...............	53	57	49	46	60	36

	July.	August.	Sept.	Oct.	Nov.	Dec.
Consumption,............	203	230	224	261	214	238
Marasmus,...............	152	203	151	100	77	75
Inflammation of Lungs,...	53	47	46	67	105	116
Cholera Infantum,........	308	316	115	37	5	6
Dropsy in Head,..........	90	116	61	70	53	78
Dysentery,...............	146	182	135	87	41	21
Diarrhœa,................	152	160	119	42	39	37
Croup,...................	28	32	36	81	70	89
Small Pox,...............	21	28	26	58	90	132

This table furnishes us several interesting facts. We see consumption presenting a nearly uniform mortality in the different months, contrary to the popular belief. Marasmus was more fatal in warm than cold weather, and the bowel complaint most severe in August, which was also the month of the highest average temperature.

It will be recollected that coup de soleil or sun stroke, caused an unusually large number of deaths last summer (260). Twenty-five of these occurred in June, one in July, two hundred and twenty-four in August, nine in September, and one in October. The Inspector adds, that most of these cases were unacclimated foreigners; 204 were males, leaving 56 females. In no previous year, has there been reported a larger number than 36 deaths from this cause. According to an interesting article on the sanitary condition of the summer of '53, published in the Journal a year ago, it would seem that the humidity of the atmosphere as well as the high temperature produced these cases.

BIBLIOGRAPHICAL NOTICES.

ART. XIII. *Principles of Comparative Physiology.* By WILLIAM B. CARPENTER, M.D. F.R.S., F.G.S., Examiner in Physiology and Comparative Anatomy in the University of London, etc., etc. With three hundred and nine wood engravings. A new American, from the fourth and revised London edition. Philadelphia: Blanchard and Lea, 1854, 8vo. pp. 752.

THE appearance of the present edition of Dr. Carpenter's work on Comparative Physiology has long been impatiently anticipated by advanced students in physiological and natural science. The delay, however, in its publication in this country, arose from circumstances which reflect creditably upon the American publishers, and add materially to its value. It has been their purpose to bring out the volume in a condition not at all inferior to the foreign edition as regards illustrations, and to accomplish this required time and preparation.

The first edition of this work appeared in 1839, the second in 1841, and the third in 1851. Neither of these editions was republished in this country, but by an arrangement between the English and American publishers, the third edition was printed on joint account, and thus it appeared in this country. Its reception was such as to induce the latter to reprint the next English edition, in order to have it range with their reprint of the same author's work on Human Physiology.

The author states that this is not altogether a new edition of the original work on the "Principles of General and Comparative Physiology," for the success of the previous edition of that work induced him to change the plan, whereby he has been able to add much new matter, and bring each subject completely up to the present time. This edition appears, therefore, as a treatise on Comparative Physiology, and it is the author's design to follow it with the General Physiology of the former edition as a companion volume. Thus by a division of subjects, he is enabled to render each part as perfect as the advancing Science of Physiology will admit of, under any circumstances.

The importance of a thoroughly scientific and comprehensive work on Comparative Physiology can not be over-estimated. This science commends itself to the attention of the student not less by its inherent attractiveness, than by its necessary connection with a proper understanding of Human Physiology. It is but recently, it is true, that physiology has been recognized as part of a prescribed course of medical study, yet within that short time it has come to be considered, not merely as essential to a complete medical education, but as absolutely indispensable to a knowledge of the first principles of the science of medicine. Physiology has attained its true position, and now ranks next to anatomy in the course of study laid down by our best medical institutions. As a natural result of the importance which our schools have latterly given to physiological studies, a class of earnest and successful cultivators of this science have risen, who are doing more perhaps than any other, to give us a national reputation in the medical world.

We hail, therefore, the appearance of a work like this, which will tend far more powerfully than its predecessors to stimulate the growth and extension of physiological science in this country. It contains within the compass of a fair-sized volume a complete survey of the animal kingdom in its physiological relations, and presents us with the most recent opinions and latest researches of the best authorities. It is written in the pure, classical, and perspicuous style for which Dr. Carpenter has been so justly celebrated, and while, therefore, it is adapted to the comprehension of the beginner, and may serve him as a text book, its completeness will render it a work of reference to the most advanced student in this department of natural science. A most valuable addition to this edition is a full bibliographical index. Of the execution of the work we cannot speak too highly. The illustrations are numerous, original, and in the very best style; the typography clear, and the general appearance of the volume is neat and elegant.

ART. XIV. *Manual of Human Microscopical Anatomy.* By A. KÖLLIKER, Professor of Anatomy and Physiology in Würzburg. Translated by GEO. BUSH, F.R.S., and THOMAS HUXLEY, F.R.S. Edited, with notes and additions, by J. DA COSTA, M.D. Illustrated by three hundred and thirteen engravings on wood. Philadelphia: Lippincott, Grambo and Co., 1854, 8vo. pp. 802.

PROF. KÖLLIKER very justly remarks in the preface to this work that "Medicine has reached a point at which Microscopical Anatomy appears to constitute its foundation, quite as much as the anatomy of the organs and systems; and when a profound study of Physiology and Pathological Anatomy is impossible, without an accurate acquaintance, also, with the most minute structural conditions." He considers it the duty, therefore, of the cultivators of this branch of science to communicate the results of their researches to all who are devoted to the study of Man, and to render them easily available by students and practitioners. With this view he has prepared this manual, omitting all polemical disquisition, and leaving the history of the science in the back ground. For further information he refers to his "Microscopical Anatomy," in which the *data* for all that is here only briefly expressed, will be found.

The value of this work is to be estimated not only by the intrinsic importance of the subject-matter which the author has modestly asserted, but also by the high authority which the sanction of his own investigations attaches to them. Prof. Kölliker now ranks as the first living Histologist. Although undoubtedly anticipated in the discovery of some of the principal facts in histological science by Martin Barry, he has, nevertheless, the great merit of having cultivated every portion of this fertile field, and reduced these isolated facts to order, and therefrom developed a beautiful and symmetrical science.

The work before us is a reprint of the Sydenham Society Edition, which was translated by Mr. Busk, and Mr. Huxley, names highly distinguished in microscopical science in Great Britain. They seem, however, to have been anticipated in the actual commencement of the translation of the work by our countryman, Dr. Da Leosta, who, impressed with the absence from our medical literature of a systematic treatise on Microscopical Anatomy in its connection with Physiology and Pathology, had already formed the design of translating Prof. Kölliker's Manual, and was progressing with the work when he learned the intention of the Sydenham Society. As the time and labor requisite for an original translation would have prolonged the publication of the work far beyond the appearance of the English edition, he resolved to adopt the translation of this Society, and merely append such notes as he intended to have added to his own edition.

In the execution of this plan, he has noted all the more recent contributions to Histology, and incorporated into the text many paragraphs from the author's larger work. He has also communicated recently with the author, and learned his present opinions on subjects which have been more thoroughly investigated since the publication of his work. All slight deviations from previously expressed opinions have thus been carefully noticed. The American edition is also furnished with an index, in which all other editions are deficient. To complete the summary of the improvements made by the American editor and publishers, we must add that the wood-cuts are those used in the *original* German edition.

It will be seen that this edition is superior to the English in the completeness of the subjects and the accuracy of the investigations, and in the beauty and fidelity of its illustrations. It is also much more convenient in having a copious index, and in being published in a single volume.

ART. XV. *The Principles of Animal and Vegetable Physiology: A Popular Treatise on the Functions and Phenomena of Organic Life.* To which is prefixed a general view of the great departments of Human Knowledge. By J. STEVENSON BUSHNAN, M.D., Physician to the Metropolitan Free Hospital, etc., etc. With one hundred and two Illustrations on Wood. Philadelphia: Blanchard & Lea, 1854. 8vo., pp. 234.

The Principal Forms of the Skeleton and of the Teeth. By PROFESSOR R. OWEN, F.R.S., etc., Lecturer on Comparative Anatomy, etc., etc. Philadelphia: Blanchard & Lea, 1854. 8vo., pp. 329.

THESE two small volumes, we are informed in the Publisher's preface, belong to a series of works which are being published in London under the title of *Orr's Circle of the Sciences.* The editor of the series is Dr. Bushnan, the author of the first volume above announced. The design of this series is to furnish a class of works upon the most important and useful branches of natural science, suited to popular reading, and which may serve as guides to the student in the pursuit of knowledge in any department of which they treat.

ART. XVI.—*An Examination of the Practice of Bloodletting in Mental Disorders.* By PLINY EARLE, M.D., author of "A Visit to Thirteen Asylums for the Insane in Europe," &c., &c. New York: S. S. and W. Wood, 1854. 8vo. pp. 126.

No one who reads this interesting volume will fail to derive from it a good degree of practical instruction. If there was wanting evidence of the diversity of opinion, on a point of medical practice, we feel assured that a perusal of this monograph will fasten the conviction that it did not exist on the point of bloodletting in mental disorders.

The object of Dr. P. in preparing this work has been to answer the following question, viz.:—*To what extent, in regard to both frequency and quantity, is the abstraction of blood required in the treatment of Insanity?* The final answer to this question is summed up in the following conclusions:—

1. Insanity, in any form, is not, of itself, an indication for bloodletting.

2. On the contrary, its existence is, of itself, a contra-indication. Hence, the person who is insane should, other things being equal, be bled less than one who is not insane.

3. The *usual* condition of the brain, in mania, is not that of active inflammation, but of a species of excitement, irritability, or irritation, perhaps more frequently resulting from or accompanied by anæmia, debility, or abnormal preponderance of the nervous over the circulatory functions, than in connection with plethora and enduring vital power.

4. The excitement, both mental and physical, produced by this irritation, can, in most cases, be permanently subdued, and its radical source removed by other means, more readily than by bleeding.

5. Yet insanity may be coexistent with conditions,—such as positive plethora, a tendency to apoplexy or paralysis, and sometimes sthenic congestion or inflammation, which call for the abstraction of blood. Therefore,

6. Venesection in mental disorders should not be absolutely abandoned, although the cases requiring it are very rare.

7. As a general rule, *topical* is preferable to *general* bleeding.

8. In many cases where the indication for direct depletion is not urgent, but where bloodletting, particularly if local, might be practised without injury, it is safer and better to treat by other means, equalizing the circulation and promoting the secretions and excretions.

9. The physical conditions requiring blood-letting more frequently exist in mania than in any other of the ordinary forms of mental alienation.

10. Insanity following parturition, other things being equal, is to be treated by bleeding less frequently than that which has its origin in other causes.

11. If the mental disorder be the direct result of injury to the head, the treatment must be directed to the wound, or its physical effects, not specially to the psychic condition.

12. In many cases where insanity is accompanied by typhous symptoms, and in some where the aspect is that of acute phrenitis, active stimulants alone can save the patient, and direct depletion from the circulation is almost certainly fatal.

PART THIRD.

FOREIGN MEDICAL RETROSPECT.

PRACTICAL MEDICINE.

Scarlatina Complicated with Acute Rheumatism. By Dr. HENRY KENNEDY.—Pains of a rheumatic character, in connection with scarlatina, present themselves to our notice under three very different aspects, which it is necessary to bear in mind. In the first, they usher in the attack; in the second, they appear whilst the eruption is still out on the patient—the disease being at its height; and in the third they come on just after the attack is over, and form then what may be called a sequela of the disease. Of the first it will not be necessary to speak at any length; they are exceedingly common at this period, and are, in fact, exactly analogous to those pains which are so well known as ushering in nearly all the forms of acute disease. It is also worthy of remark, that precisely the same character will be noticed in connection with them as may be observed in our ordinary fevers; that is, that at certain periods these pains are very much more prominent symptoms than at others; in fact, they may be so severe as to constitute the leading cause of complaint. In my own experience, they are more common in adults affected with scarlatina than in children; and this we might presuppose, inasmuch as rheumatism is a more frequent disease in adult than in early life. The pains I now speak of are usually described as passing through all the limbs, though I have seen them often confined strictly to the joints—such as the knees and wrists,—and even in some cases a certain amount of swelling may be observed; this, though, is the exception to the general rule. These pains may be classed amongst the premonitory symptoms of the first stage of scarlatina; that is, when they are present; for numerous cases occur where they will be scarcely noticed. Pains of precisely the same character generally usher in an attack of rheumatic fever. In the majority of cases these pains subside after two or three days, and so leave the scarlatina to pursue its own course. In other instances they go a stage further; and then we have the joints swollen, the attendant redness, and every sign of well-marked rheumatic fever, excepting that there may not be such profuse sweating as commonly attends that disease when existing *per se.* I am now speaking of a period when the rash is fully developed, and at the same time the joints severely affected with acute rheumatism: a point which I believe to be of some importance, and which, in January, 1853, came under my notice in a very marked way, in a family of five brothers and sisters, in each of whom rheumatism of the joints was the leading feature of the attack. In two only, however, were the joints swollen precisely as in acute rheumatism, while the rash was still visible, and the throat of each very sore. To a brief notice of these two cases I shall beg to call attention.

Case I.—A lady, aged 23, unmarried, was attacked with the usual premonitory signs of scarlatina four days previous to my seeing her in consultation. She suffered at first from severe headache, sore throat, and general pains through the body; these signs were shortly followed by a well-marked rash, without, however, any improvement in the pains, which, on the contrary, seemed rather to increase in intensity, and at the same time to localize themselves about the lower joints, which shortly became swollen. It was in this state that I first saw her. Her pulse was 116, full and bounding, but compressible; her tongue and throat morbidly red and dry, particularly the latter, which presented an angry, glazed appearance, attended with much swelling of the internal fauces; the rash was still visible in patches; the skin was morbidly hot, even though it gave a feeling of trivial moisture; the heart's action was regular, and there was no souffle; the distress was very great, and entirely referred to the swollen joints; the knees, ankles, wrists being all engaged, and beside these the nape of the neck.

Case II.—A sister of this patient, aged 17, lay in the same room. She had some symptoms identical with the first case, but with her the rash was still fully out; her joints were also affected with acute rheumatism, though not so many as in the former case; her pulse was 140, and very weak; and her throat was much engaged. It was, however, owing to most distressing and alarming fits of violent dyspnœa that I was asked to see this patient; and on the most minute examination I could not detect any thing wrong with either the lungs or heart, though it was possible the latter might have been engaged, and more especially since the pulse was so rapid; there was no external swelling of the neck, such as I have often seen attend severe dyspnœa, nor such a state of the internal fauces as would account for it. I should have stated, that this girl's distress was referred to the larynx, and chiefly to the left side. Under these circumstances I came to the conclusion that the fits of dyspnœa must be nervous, and on the treatment I shall presently make a few remarks. These two cases were good examples of the combination of acute rheumatism with scarlatina; and it may be remarked, that the remaining three members of the same family had all severe pains in their joints, though no swelling was visible.

The third and last way in which rheumatism may complicate scarlatina is by coming on as a sequela of the attack; that is, after the rash has declined, and the patient may have made some approach to convalescence. Of this occurrence I have now seen several well-marked examples. The following may be given as bearing on this point:—

Case IV.—A boy, aged four years, was convalescent from scarlatina about one week, when he was again attacked with very high fever, attended by swelling of the parotid region, which was soon followed by signs of effusion into all the larger joints. The first day I saw the case, the mother had sent for me on account of the swelling of the neck, which had caused a state of wry-neck, and as no other part was then effected, I set down the case to be one of those swellings of the neck which it was so common, at that time, to meet, in connection with this exanthem. The next day I found the child was suffering severely from pains in the ankles and wrists, while the neck was still more painful than the day before. The child had been raving and screaming all night, the fever was at the highest pitch, and the skin was absolutely burning: the affected joints were red and swollen. The following day I found the ankles quite free from swelling and pain, while the knees had been attacked with both. It is enough for my present purpose to add, that this child got well in some days. The cases which have been given are sufficient to establish the fact that acute rheumatism may exist with scarlatina, or may occur as a sequela of that disease; it was, however, for another purpose than the mere announcement of this fact that they have been brought forward now. I wish to speak of them in reference to the question of diagnosis, for in this point of view there is really more difficulty than might at first sight appear. Acute rheumatism may be thought an affection, about the diagnosis of which there could be little or no doubt. Under the circumstances, however, that I am now speaking of the disease, it is a very different matter, and cases, I am aware, will occur where the greatest doubts will exist as to the nature of the attack. The disease with which acute rheumatism may be confounded is, of course, the well-known one where purulent effusion takes place in the joints or elsewhere,—an affection by no means uncommon in scarlatina, and about as fatal as can be met with. In the last case I gave, that of the boy of four years old, I had first set down the disease as one of purulent effusion; it had really every symptom of that formidable affection. The way in which the attack commenced, by the swelling of the parotid region, was little likely to lead to a correct diagnosis, and it was only the day following this, when four of the larger joints were attacked, that the question arose as to what was the nature of the disease; at this time there was a something about the case which struck me as strange. I observed, that though there was swelling of the neck, still it had not *increased* from the day before; now this fact, coupled with an intense degree of fever (supposing the case to be one of purulent effusion), had never before occurred in my experience, for twenty-four hours had always proved sufficient time to have caused a material increase in the swelling; here, however, it will be observed, there was none. But, again, as far as I had seen, no case had ever come under my notice amongst children, where pus was poured into four of the larger joints simultaneously, as appeared to have taken place here: it was usual to find but one joint affected at a time, and if more were attacked, it was in succession. For these reasons, then, I was kept in a state of suspense, which the following day cleared up, as already detailed. This case, which was also seen by my friend, Dr. Croker King, now of Galway, was to me one of great interest, being the first instance I had seen where a distinct rheumatic attack, and of a very severe nature, set in after scarlatina.

On the subject of treatment one or two remarks will suffice. In the first case given, where acute rheumatism coexisted with scarlatina, after paying attention to the state of the bowels, she was, ordered the decoction of bark in full doses, together with a good opiate, in the form of morphia, at night; subsequently the bark was given in the effervescing form, and this case made a very good recovery as regards the rheumatism, though a long period elapsed before she enjoyed her usual health. In the second case, where, with rheumatism and scarlatina, there were also fits of urgent dyspnœa, an emetic was administered with very marked advantage; subsequently she took lemon juice with good effect, and her recovery was a very quick one. Of the treatment of rheumatism complicated with scarlatina, I have had comparatively little experience. But I believe some plan, like that just given, and of course suited to the demands of each particular case, holds out the best prospect of a rapid recovery. Bark in full doses is certainly useful, nor does a furred tongue, and other signs of fever, deter me from its use. On the other hand, there are cases where it does not agree, and these I am unable to describe particularly. I recollect well, in a conversation with the late Mr. Colles, his stating the very same thing in reference to the ordinary acute rheumatism, viz.: 'that in many cases of the disease, bark was the proper remedy, whilst in others again it disagreed.—*Dublin Quar. Jour.*

Opiate Inhalations and Fumigations. By Dr. Lombard, of Geneva.—I am aware that the attempt has often been made to introduce opium in the nasal fossæ, chiefly for the abortive treatment of coryza, either by means of injections of water and laudanum, or by making the patient snuff up a powder of sugar and morphine mixed. But the end I wish to attain to is very different; the greater tenuity of the smoke, not less than its warmth, allows it to penetrate, without pain as without difficulty, into the crevices of the nasal fossæ; a result which cannot be obtained by a liquid, still less by a powder, however impalpable. The method that I am about to submit to your notice, after two years and a-half of clinical observation, seems to me very different from those of which I have just spoken, and I can affirm, without the least fear that experience will contradict my assertion, that the inhalation of opium smoke into the nasal fossæ is a most useful therapeutic resource. I shall first mention some of the cases in which it has prospered admirably in my hands. You have, no doubt, met with, in your practice, cases of coryza, accompanied with lancinating pain in the frontal sinus; pain which sometimes becomes very intense. In such cases it is, that I have seen the opium fumigations produce truly marvellous results; pain has ceased as if by enchantment, and an almost intolerable state has been succeeded promptly by remarkable relief.

In a case of this kind that was under my care some eighteen months ago, the pain was so intense as to make the patient cry out, and induce him to believe, although of a firm and by no means pusillanimous disposition, that he was suffering from a dangerous cerebral affection. These pains came on in the course of a catarrh, accompanied by intense coryza, produced by a cold blast playing all night on the face of the patient. Two or three fumigations were sufficient to remove the pain. Some slight return of the same suffering yielded promptly to the same remedy, to the exclusion of all other treatment. A cure so prompt and easy gave me confidence in a remedy that I then merely experimented with, especially when my memory recalled a great number of cases in which other methods of treatment had failed, and the frontal pain had continued, in spite of the most varied medication.

The opiate fumigations are of use not only in the continued neuralgic pain, as in the patient already alluded to, but also in the periodic form of that disease; for this circumstance does not prevent the success of the inhalation of opium. In fact, in the majority of cases I have had to treat, the frontal, temporal, or zigomatic pain accompanying catarrhal coryza is met with under the periodic form; nevertheless, this method is quite sufficient to cure the malady, without the assistance of any other medicament. Two patients, on whom I tried the effect of opiate fumigation in February, 1852, were both attacked with coryza, complicated with periodic pain. In one of them the access returned regularly at eight o'clock in the morning, and lasted till four o'clock in the afternoon; whilst, in the other, the afternoon was the time at which the return of the periodic frontal pain took place; in both cases the opiate fumigations, without any other treatment, brought about a prompt recovery. It is not only in the cephalalgia connected with coryza, that I have thus employed opium, but also in certain cases where the neuralgic pain was symptomatic of some other morbid affection, or idiopathic. After making mention of a variety of other cases in which Dr. Lombard had adopted this mode of treatment, so as either to cure or considerably relieve his patients, he proceeds to consider the doses of the drug, and the manner in which it should be used

I commenced with five centigrammes (about one grain) of pulverised opium, mixed with as much sugar, and sometimes an equal part of gum benzoin; later I ordered ten or fifteen centigrammes in each fumigation; but the intermediate doses of ten centigrammes seemed to answer all the indications, and produce the desired effect. I have repeated the fumigations two or three times a day, but sometimes having had recourse to them oftener, I did not regret it, having witnessed no bad effect from it.

As regards the mode of administration, it is as simple as possible:—I heat in the fire a thin plate of iron, as a shovel for example, and I direct the patient to take the powder in small pinches and throw it on the hot iron, taking care to hold the head over it, so as to breathe the fumes freely not only through the nostrils but also through the mouth. I have often employed the smoke of opium, obtained by another method, which consisted in mixing a solution of opium with agaric prepared and properly dried. By soaking a certain quantity of amadou in a known quantity of this tincture, we can administer a dose as exact as of the powder itself. The amadou so prepared is lit and burnt under the nose of the patient. In fine, I do not hesitate to advise the employment of opiate fumigations in all cases of neuralgia occupying the frontal, temporal, or zigomatic regions, either of a continuous or periodic character; although it is to be remembered that it is above all in the catarrhal neuralgia, often complicating coryza, that the employment of my method is found to succeed most satisfactorily.—*Dublin Hospital Gazette* frcm *Gaz. Médicale.*

Epigastric Neuralgia. By Dr. Lees.—William Swan, ætat. 38, stout, healthy-looking man, of temperate habits, and in good employment in Mr. Roe's distillery, was admitted, under my care, to the Meath Hospital, complaining of tenderness and intense pain on the slightest pressure in the epigastric region, over a space about the size of a five-shilling piece, immediately under the ensiform cartilage. On the slightest touch of the hand his face assumes an expression of great agony, and is bedewed with cold perspiration. He says that he never experiences pain in the stomach, but that, after eating, he has been often obliged to lift his shirt from contact with the epigastrium, as the tenderness caused by even its opposition was intolerable, although it was not aggravated by increasing the pressure. The state of his general health and appetite is good; functions natural; tongue clean; bowels regular; no thirst; nausea, or vomiting. He does not suffer from flatulence, has no headache, but is very low spirited. The circulation is languid; pulse 56; heart's action feeble, but regular, and without any murmur; the abdominal muscles are in a state of constant tension, hard and rigid; there is no evidence of any tumor, nor abnormal pulsation in the epigastric region; neither pain nor tenderness in the back, nor in the course of the intercostal nerves. His easiest posture is on his left side, with the right leg drawn up. When he lies on his back, with the right leg extended, the spine is arched, so that the hand can be passed freely under it, but it becomes quite flat in contact with the bed, on the leg being flexed. The urine is of a natural appearance, sp. gr., and reaction; no visible sediment, but on microscopic examination there are seen numerous very minute crystals of oxalate of lime aggregated in long masses.

He could not assign any cause for his complaint, except that he has been constantly employed in a very dusty meal-room, but he has neither suffered from cough, nor from any difficulty of respiration.

Tincture of aconite was applied over the tender part, but without any relief. I then ordered:—

℞ Infusi Valerianæ,
Cinchonæ, a a ℥iij.

Sumat ℥i. ter in die; a small blister over the part, and to be dressed with Acetate of Morphiæ ointment, gr. i ad ℥i.

He was allowed meat every day, and advised to walk about and amuse himself. Under this treatment he rapidly improved, and was nearly quite free from his complaint when I resigned him to the care of Dr. Stokes. He, however, unfortunately relapsed, but was cured eventually by continuing the same medicine, and by the repeated application of leeches over the part. If the subject of the above case had been an unmarried female, I should have had little hesitation in regarding it as one of those anomalous forms of hysterical affection occurring in that class of persons; but I confess that, at first, I felt in doubt as to the cause of this man's sufferings. The superficial seat and character of the pain evidently showed that it was not gastralgia, while the absence of thirst and of fever satisfied me that there was no inflammatory action in the mucous membrane of the stomach. There was no evidence of inflammation in or under the skin, nor in the sheath of the rectus muscle, as occurred in a case under the care of Dr. Neligan, and which presented nearly similar symptoms. My case was examined carefully for aneurism of the abdominal aorta, for disease of the spine, and for psoas abscess, as the peculiar arching of the spine in the horizontal position led us to suspect that there was some change of structure in these parts which might account for this occurrence; but the most careful investigation by Dr. Stokes and myself could not detect any evidence of disease there, nor in the circulatory or respiratory apparatus. I, therefore, came to the conclusion that it was a form of neuralgia, and the result of my treatment satisfied me that I was right.—*Dub. Hospt. Gaz.*

Chloroform in Fever. DR. GORDON, of the Hardwicke Fever Hospital, resorts to the use of chloroform to subdue the nervous irritation in fever, and obtain sleep. He remarks:—

To the different means which have been made use of for this purpose, I would now add the internal administration of chloroform. I have used it with the happiest results when all other means had failed, and I can speak with confidence of its certain and speedy action. The following case affords a good example of its effects, and the mode of its administration:—

Patrick Dempsy, aged 25, was sent from Santry to the Hardwicke Hospital, on the 8th of December; he had been eleven days ill of fever; his body was covered with dark-colored maculæ; his pulse was 110, and very weak, his speech muttering and indistinct; he has subsultus in both upper and lower extremities. His head was shaved, he was ordered the bark mixture of the hospital, and half a pint of wine. Late in the evening he began to rave violently, and could not be induced to remain in bed; he was ordered large doses of hyoscyamus, and the back of his head was blistered; he was so violent as to require the use of a strait waistcoat all night. December 9.—Has not slept since admission. Pulse 132; very weak. He continues constantly muttering and raving. Tongue dry and brown; eyes slightly suffused; head not very hot; respiration short, frequent, and irregular. He still requires the strait waistcoat to keep him in bed. He was now ordered twenty-five minims of chloroform in a draught, to be repeated in an hour. After the second draught his agitation and restlessness ceased, and the waistcoat was removed. He dozed a little through the day, but only for a few minutes at a time. Towards night he again became restless and delirious; the same quantity of chloroform was again administered, and repeated in an hour, when he fell into a sound sleep, which continued for nine hours. He awoke perfectly sensible; the subsultus had ceased, and his pulse had fallen to 100. He continued to improve, and in a few days was convalescent.

In this, and other similar cases, chloroform acted by producing anæsthesia of the sensory nerves, and exerting a paralyzing influence on the muscular fibre; and this it appears to effect without depressing or deranging the nervous force, as is the case with sedatives in general, while it is altogether free from the objection of causing depression of the action of the heart, as is the case with some special sedatives. My colleague, Dr. Corrigan, has just treated a somewhat similar case by the internal administration of chloroform. I had an opportunity of daily witnessing the progress of the case; and, by his permission, I here append it.

Denis Behan, æt. 20, a porter from High street, was admitted into the Hardwicke Hospital, January 4, 1854, the fifth day of his illness. On the sixth day he was thickly covered with bright maculæ. His tongue was loaded, but moist; his pulse 112; respiration 22; no abnormal sound in the lungs; no tenderness of abdomen. He is reported not to have slept for two nights. His eyes are red and injected, and his head hot. His head was shaved and cold lotion applied. Seventh day.—Pulse 116; respiration 28; slept but little. Eighth day.—Pulse 120; very feeble; respiration 32. Ordered bark and wine. Ninth day.—Pulse 126; very feeble; respiration 32; head hot; constantly raving, and getting out of bed; no sleep; subsultus of hands; tongue dry; great difficulty of utterance. Vesicatorium nuchæ; eight ounces of wine. Tenth day.—Pulse 130; weak; raving continually; difficult to restrain; requiring the strait waistcoat; constant talking; no sleep; tongue brown and dry in the centre; thirsty; eyes very congested; pupils dilated. Chloroform was now administered by inhalation, without any other effect than the pulse being slightly reduced in number. The patient was in no way quieted by it. Four leeches were now applied to the temples without any good effect. At 5 P.M. he took ℥ss. chloroform by the mouth, and continued it every second hour till 11 P.M., when, as he did not sleep, and the delirium continued, he took a similar dose of chloroform every hour through the night. At 3 A.M. he was somewhat quieter, but the same dose was continued every hour till 8 A.M. Eleventh day, 10 A.M.—Much quieter, but has not slept. Pulse 110; pupils natural size; subsultus nearly gone; tongue brown all over; sordes on teeth; bowels free; urine high colored, sp. gr. 1·020. Another dose of chloroform in the same quantity was again administered; about twenty minutes after its exhibition he fell into a quiet sleep, which lasted two hours. Shortly after waking, he took another half drachm of chloroform, when he almost immediately fell asleep, and awoke after several hours much refreshed and quite collected. His return to health was further indicated by the immense quantity of nitrate of urea, which an excess of nitric acid deposited from the urine.

In the above case the chloroform was longer in producing the effects than in any instance in which I have yet used it. We learn from it, however, that we are not to be discouraged by the apparent failure of the first dose or two in procuring sleep, for, as in the present case, although actual sleep may not be at once procured, we may expect that a state of calm and quietness will be induced, which would soon be followed by "*Nature's sweet restorer, balmy sleep.*" We learn also from this case, that the inhalation of chloroform is, to say the least, useless in procuring sleep in cases of cerebral excitement in fever. I had, on one occasion before, in the Hardwicke Hospital, fully tried this mode of administering it; its inhalation was followed by general convulsive movements, very similar to an epileptic seizure, and I have not since administered it by inhalation in any similar case. Dr. Corrigan carefully tried the effect of inhalation three times in the above case; each time without any good effect.—*Dub. Hosp. Gaz.*

Treatment of Delirium Tremens. Dr. Peddie (*Monthly Journal*) deprecates the employment of opium and stimulants in the treatment of delirium tremens and gives a decided preference to antimony:—The treatment recommended by Dr. Graves, to which I have already referred, is advocated on the ground that opium is highly dangerous in the early part of the paroxysm. His rule of practice is to begin with tartar emetic alone, with the view of combating vascular excitement, then to add a little opium, and gradually to increase the quantity, keeping its action carefully guarded and controlled by the antimony, until at last, when engorgement of the cerebral vessels is no longer to be apprehended, to use opium alone. If opium is to be given at all in delirium tremens, this is certainly the safest mode of prescription. For some time I tried it, but from considerable previous experience of the beneficial effects of antimony in this disease, I soon became convinced that it was from that agent solely, especially its effects in the first stage, that ultimate benefit was derived; that the relative quantity of opium employed at first is too small to counteract the power of the antimony, or to produce any notable effect whatever; that in ordinary cases, ere the time arrives for increasing much the amount of the opium, the affection has run, or nearly so, its natural course, and the period for the salutary sleep commencing is at hand; and that when a greatly-increased dose is given before this much wished-for change has arrived, there is a proportionate increase of excitement and consequent delay of its occurrence.

From these considerations, I resumed the use of the antimony alone; and, during the last ten years, I have treated upwards of eighty cases of the genuine disease, many of them very severe ones, with uniform success,—not only in regard to the speediness of the immediate recovery, but the comparatively thorough restoration to a healthy condition of body and mind;—as much so at least, as could possibly be expected in individuals, many of whom had been, and were likely soon again to become, habitual drinkers. The dose which I have been accustomed to give has ranged from one quarter to one-half of a grain, in simple solution, every two hours, sometimes at shorter intervals, according to the degree of excitement and irritability. The action of the antimony appears to be chiefly sedative. Its direct influence is to reduce the vascular excitement of the brain, soothe the nervous system, and diminish muscular power; and its more indirect action is exerted on the functions of the skin, kidneys, and intestinal canal. In two or three instances only have I found it necessary to suspend its employment, in consequence of diarrhœa and hæmorrhagic discharge from the bowels;

and in these cases I substituted digitalis and ipecacuan with marked benefit; and I do not recollect of ever seeing it produce continued vomiting, although occasionally I have found the first or second dose eject from the stomach a quantity of bile. It is for the sake of its emetic effect that, in Germany and America it has been prescribed in large oft-repeated doses, even from four to seven grains every hour, and that, too, according to report, with benefit. But although there is, doubtless, extraordinary tolerance of this agent in delirium tremens, I do not think that the use of such, or any other very heroic means, are warranted. Bleedings, large opiates, or large doses of tartar emetic, are all, although certainly not equally, unsafe, and therefore to be deprecated. An antimonial course of treatment in moderation, and with the design I have indicated, gently diminishes excited action, induces weariness of muscle, general nervous exhaustion, and mental languor. It thus removes all hindrances to the occurrence of the salutary sleep. It prepares the way for it, not by forcing, but by favoring it; and when the individual, exhausted, seeks his couch, and finds repose, that goes on, not as a drugged sleep, but as a purely natural and profound repose, from which he awakes with restored reason and muscular control.

Success of different methods of treating Cholera. By John Crawford, M.D., Physician to the Glasgow Cholera Hospital.—The different modes of treatment employed in the various forms of choleraic disease, with their respective results, are exhibited in the following table:—

Table showing the Results of Five different Modes of Treatment.

		1. Salines alone.	1. Salines with adjuncts.	3. Calomel.	4. Stimulants.	5. Astringents with opium.	Total.
	Diarrhœa	2	9	0	1	26	38
	Cholera	13	53	13	6	29	114
	Collapse	5	32	12	24	0	73
							225
Cured	Diarrhœa	2	9	0	1	24	36
	Cholera	13	46	7	1	24	91
	Collapse	0	7	8	2	0	12
Died	Diarrhœa	0	0	0	0	2	2
	Cholera	0	7	6	5	5	23
	Collapse	5	25	9	22	0	61

In reference to this table, the following explanations may be necessary. In the first place, in all, or mostly all cases, counter-irritation to the epigastrium and abdomen, by means generally of sinapisms—occasionally of turpentine and ammoniacal epithems, and in many cases by blistering—was used. It must, therefore, be understood, that the cases in the first column shared the benefit of this practice, though "salines alone" were administered as medicines. The "adjuncts" of the second column were almost exclusively opiate enemata and stimulants—wine, brandy, and ammonia; the opiate enemata being generally given in cases of cholera; and the stimulants—though cautiously—in collapse, or cases of cholera verging on that state. In choleraic diarrhœa, catechu and opium by the mouth were also occasionally used as adjuncts. The "salines" employed were the following:—1st. The combination of salts proposed by Dr. Stephens, viz., chlorid. sod., ℈i; bicarb. sod., ʒss.; chlorat. potass., gr. vii. These quantities dissolved in water were given every half hour, every hour, or every two hours. 2nd. The saline enema of the same writer; a table spoonful of chloride of sodium dissolved in warm water—employed only in collapse. And here, to avoid recurring to the subject again, I may mention that, although in several cases benefit appeared to be derived from its use, the advantage was only temporary, even when every precaution was taken to administer it properly. 3rd. The bicarbonate of soda, used as afterwards described. 4th. The same followed by acidulated draughts, as afterwards explained. And, lastly (chiefly in cases of choleraic disease, with irritability of the stomach), the ordinary effervescing soda-powders.

Calomel was given in various doses in different cases—grs. x.—℈i. and upwards, to produce in the first instance a sedative effect on the patient (a result which it generally failed to accomplish); in smaller doses, gr. i.—v., at intervals varying from a quarter of an hour to three hours; and in some cases in doses of gr. i. every five minutes. Upwards of 110 grs. have been continuously exhibited in this way.

Under the head of *stimulants*, I have also included—somewhat strangely, it may appear—the cases in which creasote and hydrocyanic acid were given to allay vomiting; but in almost all these cases, alcoholic stimulants were also given. That both creasote and hydrocyanic acid are useful in checking the vomiting in cholera (a combination of the two, 3 drops of the former and 2 of the latter, probably answers best) is undoubted; but in this respect they are far inferior to the bicarbonate of soda, and the creasote seems frequently to be very nauseous to the patient.

As to the effect of *stimulants*, the fourth column tells its own tale. It is however, to be noted, that a number of cases—hopelessly advanced in collapse, and even moribund—were admitted, in which nothing could be done beyond endeavoring to keep up the heat and administering stimulants. These cases, hopeless under any treatment, no doubt swell the mortality under this head; but as a general rule, alike in choleraic diarrhœa, cholera, and collapse, the exhibition of alcoholic stimulants, except in a limited number of cases, and then in small quantities, has not, so far as I have seen, been productive of benefit. They are not even agreeable to the patient. Even in the prostration of collapse, the habitual drunkard will be found to turn with loathing from the proffered wine or spirits, and beg for cold water instead.

The *astringents* referred to in the fifth column, as conjoined with opium, were principally catechu, aromatic sulphuric acid, and acetate of lead—combinations found principally useful in choleraic diarrhœa and the milder forms of cholera. On the whole, I am inclined to prefer the acetate of lead and opium in pill (diacetat. plumb. gr. ii,-iii., op. gr. i.) This was also found very useful in the diarrhœa which occasionally recurs after a smart attack of cholera. In collapse, beyond an opiate enema, if the purging still continued, I would have nothing to do with the opium.—*Glasg. Med. Jour.*

Use of Subnitrate of Bismuth in Lavements.—By M. Trousseau. (*Dublin Hospital, Gazette.*)—There has been remarked of late, in France, a great amount of "diarrhœic flux," *i.e.* of intestinal catarrh, with the production of glairy and bloody evacuations. Two infants, in La Salle St. Bernard, were cured in a very simple way:—They were still at the breast; one had had cholera, marked by vomiting, diarrhœa, coldness, and well marked emaciation. Opium, nitrate of silver, and other remedies were given, by which the sickness was arrested, but the diarrhœa continued. The other child had not had vomiting, but there was a glairy diarrhœa, showing that the disease was limited to the large intestine. M. Trousseau prescribed a lavement according to the following formula:—Subnitrate of bismuth, two scruples; thick linseed-tea sufficient; the mixture to have the consistency of soup. The diarrhœa ceased immediately upon the administration of the lavement. It is known that M. Monneret gives, in similar cases, to infants as much as two or three ounces (?) of the subnitrate of bismuth daily. M. Trousseau rarely goes beyond four scruples,—very often he is content with half that quantity administered in water, or in the form of pastilles. Dr. Lassegue, chief of the clinique of the Hôtel-Dieu, first entertained the idea of employing it as a lavement in cases of inflammation of the colon, from having witnessed its beneficial effects in certain diseases of the skin, in which some of the subnitrate, mixed with albumen or thick linseed-tea, spread upon a poultice, and rendered humid by the application of glycerine, was brought into contact with the affected parts. M. Lassegue was thus led to its employment in affections of the large intestine, and obtained results which deserve to be recorded, the more so, as the remedy being harmless, may be applied without fear in all similar cases.—*Jour. de Méd. et Chir. Prat.*

SURGERY.

Advantages of operating in certain cases of Hare-lip at a very early age. By Henry Smith, Esq.—It is obvious in the first place, that an infant with hare-lip cannot so readily take in that nourishment which is offered by nature. If, however, the deformity be remedied, the child will be placed by the aid of surgery in a much more favorable condition to receive the nutriment afforded by the mother's breast. It is plain, too, that the deformity excites most unpleasing and painful sensations in the mind of the mother and those around her; and, if the source of this anxiety can be removed at once, it is of great importance that it should be accomplished.

A third argument in favor of very early operation for hare-lip consists in the circumstance, that as the growth of the child is very rapid in the first period of life, the lip, with other structures of the body at this time, becomes more fully and fully developed, and thus, after an operation has been successfully performed, there will be a much less chance of subsequent deformity in the part. But it is in those instances where the harelip is complicated with a more or less extensive fissure in the palate that an early operation for the cure of the former is so imperatively demanded, and is attended with some beneficial results; and it is to this point especially I wish to draw attention, because, although in some recent works of surgery an operation at an early period after birth is recommended, (and I may especially allude to the *Practical Surgery* of Professor Fergusson, and to the *Surgeon's Vade Mecum*, by Dr. Druitt,) the most important reason for such a proceeding is not alluded to. And I now refer to the effect which is produced upon the fissure in the hard palate by the approximation of the edges of the lip. As long as the hare-lip remains in its primitive state, there can be no pressure upon the hard tissues underneath; but, if it be united by the surgeon, a considerable amount of pressure is exerted upon the edges of the cleft in the palate; and, in a child aged only a few days or weeks, the bones are so soft and compressible, that they are to a great extent influenced by the pressure which constantly obtains, and in the course of time the fissure becomes either entirely closed or diminished in size to one-third or one-fourth of its original extent.

I have had various opportunities of noticing this effect in instances where a very early operation has been performed for hare-lip, complicated with more or less extensive fissure in the hard palate; and so convinced am I of the importance of performing the operation as soon after birth as possible, that I invariably recommend it. And it has fallen to my lot to be called upon to perform the operation very soon after birth, where there has been, at the same time with the hare-lip, considerable malformation of the palate; and I have been able to notice the result some length of time afterwards. More than three years ago I operated upon an infant only four days old; here there was an extensive fissure extending through the hard palate into the nostril. I had an opportunity of seeing this child only a few days since, and the opening in the front portion of the palate was closed up. In this case the soft palate was extensively cleft, and that still remains open; but the parts altogether are in such a condition that, some years hence, they may be completely closed by staphyloraphy. A few weeks since, a little patient was brought to me, on whom I operated at a very early age, two years ago. In this instance there was a fissure in the hard palate, and great deformity of the jaw, a portion of which I removed at the time. There is now an admirably developed upper lip, and complete closure of the opening which existed in the palate. In another instance, where I operated at an early period, there was an immense chasm running through both soft and hard palate into the nostril. I had an opportunity of seeing this patient a few days since, and found that the anterior portion of the cleft was much diminished in size. The operation was done more than a year ago.

Mr. Bateman, of Islington, who pays great attention to this matter, operated, three years since, upon an infant only four hours after birth. In this case there was an extensive fissure in the palate. This gentleman kindly showed me this case, and, in reply to my inquiry regarding the effect which the operation had had upon the palate, he wrote word the other day that the child had died of hooping-cough last winter, but that its mother remarked that before death the fissure, which had at birth been 'so large that she could put her thumb into it, had contracted so much that it would scarcely admit the edge of a sheet of writing paper.' About a month since I operated upon an infant only six days old, with perfect success. In this case I was partly induced to perform the operation at this early period because there was a fissure in the hard palate, extending into the nostril. I have little doubt that, in time, if the child lives, the fissure will be completely closed.—*Med. Times & Gaz.*

Treatment of Articular Diseases by Actual Cautery.—By James Syme, Esq.—Case I.—*Omalgia; Application of the Actual Cautery; Cure.*—Margaret Ashton, æt. 25, admitted October 25, 1853; a servant; has generally enjoyed health, and has a very robust appearance. Four months ago, after exposure to wet and cold in washing, she had a severe fit of shivering, and was seized a few days after with pain in the right shoulder, just below the acromion, so severe that she could scarcely lift the arm; this lasted about twelve hours, and was followed in the course of the next day by intense pain in the left shoulder, below the back part of the acromion. From that day till her admission she was unable to raise the arm; the pain was for the first two months extreme, keeping her as if "in the fire all night," and banishing sleep almost entirely. During the last two months she has rested from work, and has suffered less. On admission she complained of constant gnawing pain in the left shoulder, and extending down the limb as far as the elbow, and sometimes to the fingers; when in the sitting posture she held the affected limb with the other hand, to ease the pain; the arm was also affected with a feeling of numbness and weakness; and although the shoulder was not very tender on pressure, and very gentle passive motion of the arm could be performed, through a considerable angle, without pain, yet any attempts on her own part to move it, produced great aggravation of her sufferings. As a result, no doubt, of habitual disuse, the muscles about the shoulder were much atrophied, and this caused a remarkable apparent prominence of the bony points, viz.: the spine of the scapula, the acromion, the anterior border of the outer part of the clavicle, and the head of the humerus. The shoulder had an appearance that suggested at first sight the idea of dislocation.

On the 3d November, the patient being under the influence of chloroform, Mr. Syme cauterized thoroughly the skin over the anterior and posterior aspects of the joint, rubbing a red-hot cautery iron freely backwards and forwards four or five times over each part. It had the effect of raising and rubbing off the cuticle, but did not char the skin. An hour afterwards the patient was suffering but little pain. *Nov.* 4.—Said, with a smiling countenance, that she slept well last night, the first time for four months, and feels now no pain save that of the burns. *Nov.* 5.—A poultice was applied yesterday; the pain of the burn is now gone, and she feels *no pain at all.* Says that she has not only lost all pain, but also that the feeling of numbness is gone from the limb, and that she seems to have more power in it. The burned parts present a white sloughy appearance. The poultice was continued till the sloughs separated, when simple cerate was substituted for it, with the view of retarding, rather than promoting cicatrization. *Nov.* 12.—To-day she has been trying to lift the arm, and felt none of the old pain in the attempt.

Jan. 31, 1854.—She has to-day left the Infirmary. She has for some time past been gradually acquiring more and more power in the limb; she can move the arm backwards and forwards for a considerable extent, and even raise it slightly. The movements of the forearm are free; there is no tenderness whatever about the shoulder. The return of the use of the limb has been accompanied with a restoration of the fulness of the muscles, so that there is now no difference between the contour of the two shoulders. She continues quite free from spontaneous pain. I saw her again towards the end of May. She was still quite free from pain, and there remained only some stiffness about the joint that prevented her from raising the arm to the full extent.

CASE II.—*Disease of Shoulder Joint; Actual Cautery; Cure.*—Lily Kay, æt. 50, admitted March 23, 1854. Has generally enjoyed good health, except that for the last twelve years she has suffered inconvenience from what she supposed to be rheumatism in the right shoulder, characterized by shooting pain, occurring more especially when she attempted to lift any thing. In January last the limb became completely disabled from increase of the pain, which now assumed a gnawing as well as a shooting character, and also began to be felt in the elbow joint, and in the arm, forearm, and hand. At this time she first observed the existence of swelling about the shoulder joint.

The pain continued to increase till the time of her admission into the Infirmary, when it was exceedingly severe; not constant, but frequently keeping her awake at night. She was unable to raise the arm from the side, and had a sense of weakness in the limb, and some stiffness of the hand. There was considerable swelling about the shoulder joint, which was tender on pressure, particularly at the anterior and posterior aspects. On the day of admission Mr. Syme applied the actual cautery freely over the anterior and posterior parts of the joint, the patient being under chloroform. From this time she lost the old pain entirely, or at least was uncertain whether that which she still felt was not altogether that of the burn; and though the pain of the burn was considerable till the sloughs separated, yet it was much less distressing than the old pain, for which it was substituted, so that she slept much better than before the application of the cautery. The sloughs came away on the 1st April, on which day she had a slight return of the old pain near the wrist, but it has not occured again, and she is now (4th April) quite easy. The swelling about the shoulder has almost entirely disappeared, and there is little, if any, tenderness; the sores are granulating healthily. *April* 14.—Continues quite easy. She was discharged on the 27th April; I saw her about a month after, and she still continued free from pain.

Case III.—*Disease of Wrist Joint; Actual Cautery; Cure.*—Janet Archibald, æt. 32, admitted November 2, 1853. Rather a weakly subject. In October last she "took a shivering," without any particular exposure to cold, and a pricking pain came on in the left wrist, which increased for a time, and was accompanied with swelling. She applied poultices medicated with acetate of lead, and under their use a great improvement had taken place at the end of five weeks, when she got fresh cold in it, as she says, and it became excessively painful; the pain continued ever after till her admission, and although its extreme severity was then somewhat mitigated, yet it kept her awake a good deal at night; it was partly dull and heavy, and partly of a shooting character, and extended down through the hand and fingers. There was also an occasional tingling sensation in the fingers, and a sense of unnatural weight in the limb. A great degree of swelling existed about the wrist-joint, particularly on the dorsal aspect, and this part when manipulated gave a feeling very like that of fluctuation, so that her medical attendant had been desirous to open what he had supposed a collection of matter there.

Mr. Syme regarded the condition of the wrist as almost hopeless, but as he thought suppuration had not yet occurred, he determined to give the limb a chance with the actual cautery, which he accordingly applied on the dorsal aspect in two lines, crossing one another over the articulation. The pain and swelling both diminished greatly during the first four weeks after the cauterization; some aggravation of the symptoms then occurred for a time, but as the sore was still open, Mr. Syme thought it unnecessary to interfere further, and a gradual improvement afterwards took place, till at the time of her leaving the Infirmary (Feb. 14, 1854) there was scarcely any swelling and a very little pain. I saw her again on the 10th of June, there was then no swelling whatever about the wrist, and no uneasiness except a painful feeling of weakness when she exerted it much.—*Monthly Journal.*

Water Strapping as a Surgical Appliance.—By C. Holthouse, Esq.—The object of the author of this paper was to direct the attention of the profession to the superiority of wet-strapping over ordinary diachylon plaster, in the treatment of ulcers and certain cutaneous affections of the extremities, as advocated by Mr. Chapman, and to recommend its adoption in injuries and diseases of the joints, and in dressing stumps after amputation. The advantages of this application over plaster are:—1. Its innocuousness, being entirely free from the irritating effects of the latter, and never producing inflammation of the skin, or the eruption of pustules, or vesicles. 2. The comfort the patient experiences from its application. 3. Its cleanliness. 4. The ease and quickness with which it is removed, from its not adhering to the hairs of the part. 5. Its cheapness. 6. It may be made the vehicle for the application of remedies.

The material made use of may consist of linen or calico, bleached, or unbleached; and the older it is, provided it be not rotten, the better it answers the purpose. It must be cut, or torn into strips of varying length and breadth, according to the part to which it has to be applied; the strips must be then immersed in water till thoroughly saturated, when they are fit for use. If the disease to be treated be an ulcer of the leg, the strips should be about two inches in breadth, and of a length exceeding somewhat the circumference of the limb; they should then be applied exactly in the same manner as plaster, each piece overlapping a portion of the one immediately below it; in fact, the directions given by Mr. Baynton for strapping the limb, may be strictly followed in the application of the water-strapping, save and except that his directions to remove the hair from the part may be dispensed with; a roller must afterwards be applied in the ordinary manner.

Four cases, in illustration of this method of treatment, and of its beneficial results, were then given; one being an ulcer of the leg of fourteen years' standing, that had resisted repeated attempts to heal at other hospitals; another, a case of eczema impetiginodes, affecting both lower extremeties, and of three years and a half duration; a third was a case of a crushed thumb, followed by gangrene and subsequent amputation; and the fourth was an amputation of the thigh, for extensive disease of the knee-joint and upper third of the leg.—*Lancet.*

Un-united Fractures treated by Ivory Pegs.—Mr. Stanley concludes his lecture by citing two cases in his practice by the ivory pegs: one very successful, the other now in St. Bartholomew's, not so encouraging; but where it would appear that the process of reparation was prevented by a cushion of the crureus muscle getting between the ends of the bone, as shown by the leg after amputation, performed last month (June 1854), a large quantity of bony matter thrown out round the pegs.

Case I.—Among his notes Mr. Stanley finds the following case:—About four years ago a man was brought into St. Bartholomew's (Bentley's ward): he had been working on the railway, and sustained a very severe injury, fracture of a compound character of both tibia and fibula, if we say he was lying on his back eight months; and at the end of this period, though the external wound was healed up, yet the union of the bones was not complete; it is quite sufficient to indicate his condition and the very tedious nature of the case; in a word, it seemed one of those cases which, to Pathological Society-men, would seemed doomed never to get well. The man at length got about on crutches, but it was with most dreadful pain and torture of the limb, so that he at length gave up, wishing his leg to be cut off. It was decided, however, in consultation, to do something for the cure of un-united fracture. The first plan tried was a succession of blisters for a month with no equivalent benefit; the limb was then encased in strong leather, stiff, and about as immovable as the limb of an Egyptian mummy; but this plan did not prove either very successful. After ten or twelve weeks the question came up really of amputation, but this time with the rather fanciful alternative of ivory pegs, as suggested by Dieffenbach. The ivory pegs succeeded perfectly; and Mr. Stanley has the pleasure of seeing the man constantly brought to new life and activity by four of these rather incongruous remedies borrowed from a cribbage-board! Four were inserted, one in each bone, at each end of the fracture: small holes drilled with a common drill, respectively, in tibia and fibula, then the pegs tapped well in with something like an auctioneer's hammer. And here Mr. Stanley said, perhaps, the most curious part of the matter worth observing, is in a physiological point of view, observed also in a similar case at Leeds, one peg was entirely absorbed, the other appeared eaten away like carious pieces of human bone! When withdrawn, the small head of the ivory peg left out of the bone through the integuments was not changed at all: the successful issue of the case (after a whole year's unsatisfying ordeal in hospital) was most grateful, and the man left town quite well. In the second case, marked by all Mr. Stanley's kind attention and care, the result has not been so satisfactory: it has been a case brought into hospital of long standing, of un-united fracture, high up in the shaft of the femur, both ends freely moveable and grating together. He first tried pad and splints, next enclosed the limb in stiff leather case twenty months. After injury the question of amputation or ivory pegs, as in the former case, was again considered: the pegs were tried, but the quantity of bone thrown out was of no use, and amputation, as a last resource, was performed.—*Dublin Med. Press.*

DISEASES OF FEMALES.

Instrumental Treatment of Uterine Displacement.—[This subject was recently brought before the Academy of Medicine, Paris, by the report of two fatal cases from the use of the Uterine Catheter, one by Dr. Broca, and the other M. Cruveilhier. The subject created great interest and a committee was appointed to report upon it; the report was drawn up by M. Depaul. We copy a condensed statement of it from the *Edinburgh Monthly Journal.*] In commencing his report, M. Depaul undertakes to prove: 1. That uterine affections, usually attributed to displacement, have an entirely different origin. 2. That in most of the alleged cases, another more frequent pathological condition, which produces uterine symptoms and even sometimes causes displacement, has been overlooked. 3. That science possesses a simple and rational treatment for displacements, as efficacious, or more so, than intra-uterine pessaries. 4. That the facts adduced in favor of the treatment by these instruments, only show their entire inefficiency; and 5. That we must take into serious consideration the numerous facts which prove that the most formidable affections and even death itself, may be the consequence of these manœuvres, which are besides, on their first aspect, *repugnant to common sense!* (*repugnent à la raison.*)

Instruments.—Before proceeding to these points, the reporter specifies the instruments used in the treatment of uterine displacements, to which allusion is made. These are of two kinds (sufficiently well known in this country): 1. *The Uterine Sound,* of Simpson and Kiwisch (Recamier and Amussat had previously used a similar instrument). This instrument, which is of undoubted service in diagnosis, is also used to restore the displaced uterus to the normal position; but it is never left permanently in the uterus. 2. The *pessaries*, of different kinds which are used for the replacement and permanent support of the uterus, remaining for a considerable time in its cavity. These are known as Simpson and Kiwisch's, although the original idea of the invention is claimed for Amussat and Velpeau. They are—1. The wire pessary, or pubic pessary, having a stalk to support the interior of the uterus, in connection with an apparatus resting on the pubis. 2. The spring pessary. 3. The ball pessary, with the stalk for introducing it. 4. The galvanic pessary, made of zinc and copper. 5. The dilating pessaries, used in obstructive dysmenorrhœa, sterility, etc. The three last instruments consist of a metalic stalk which is passed into the cavity of the womb, and is fixed on an oval disc or ball. Although the use of the uterine sound is not without danger, it is principally against the intra-uterine pessaries that the criticisms of M. Depaul are directed.

Pathology, etc.—The reporter then enters on the first division of his subject: viz., the Pathology of Uterine Displacements. *What is the normal direction of the uterus? What are its displacements? Do these displacements produce the symptoms which have been ascribed to them?* M. Depaul does not agree without reserve with Cruveilhier, and others who maintain that the uterus has no certain direction; and he rejects the opinion of Boulard and Verneuil, that ante-flexion is the normal position of the womb. He maintains that however liable to vary from accidental causes, the uterus is placed normally in the direction of the axis of the brim of the pelvis. When the axis of the uterus is more inclined in any one direction, we have either *ante*, *retro*, or *latero-versions*. When the whole uterus is pushed from its position, we have total *displacement* (*refoulement*), which may also take place *forwards*, *backwards*, or *laterally*. When the uterus is bent on itself, *ante*, *retro*, or *latero-flexions*, are produced. There are also, more rarely, *flexions of the neck on the body* of the uterus; and *inflections* of the uterus, where it is curved once, or twice like the letter *S* italics. Another condition which may exist alone, or combined with the preceding, is the *descent* of the uterus (*abaissement*), generally the inferior extremity, but sometimes the middle, or possibly even the upper part of the uterus passing low down into the pelvic cavity. These displacements by descent appear to have been overlooked in France by those who used the "instrumental treatment" (*"traitement mécanique"*).

These different displacements are so common, that more than half probably of the female sex are subjects of them, and would require treatment, if these conditions were really diseases. But such is not the case; their influence has been greatly exaggerated, and it may be shown that the *symptoms attributed to these deviations belong to some other pathological condition.* In a critical analysis of M. Valleix's cases of displacement, treated by the intra-uterine pessaries, concomitant disease of the uterus, as hypertrophy and engorgement, or granulations and ulcerations of the cervix, leucorrhœa, etc., are found to have existed in the largest number: in a few, the uterine deviation discovered only after death, had produced no symptoms during life; and in some the morbid symptoms remained after the uterine displacement had been corrected. The cases of M. Gaussail analyzed in the same way, are similarly complicated. The symptoms of all the patients were much alike—viz., uneasiness in walking, pains in the loins, white or sanguineous discharges, constipation, and difficult micturition, and disorder of digestion. Yet all these affections are ascribed by M. Valleix and Gaussail exclusively to the displacement, taking no account of the hypertrophy, ulceration, or other diseased state of the uterus, which existed at the same time. The facts of M. Piachaud (pupil of M. Valleix) are of the same inconclusive stamp as the preceding; but he adds that he has witnessed dangerous (*graves*) hæmorrhages, and in two cases perforation of the uterus in consequence of the use of the pessaries!

If in these cases, complicated with other lesions, the symptoms cannot be with certainty referred to the deviation exclusive of the lesions, still less is there evidence to show that the deviations *alone* give rise to serious symptoms. MM. Dubois and Lisfranc declared that displacements were innocuous, unless attended with pathological lesion or chronic inflammation. In a number of cases of displacements of all kinds observed by M. Gosselin, at the Lourcine, none of the women had any uterine complaint whatever; in a number of other cases, where uterine pains existed, there was no displacement, and the pains were owing either to inflammation or neuralgia; and in a third set of cases, where both uterine pains and displacement co-existed, the pains ceased after repose, and the use of antiphlogistics, narcotics, etc., although the displacement persisted. In 27 cases of simple deviation, observed by M. Depaul, only two had any uterine symptoms whatever; the one (anteflexion) had more frequent micturition, and a sense of weight after long walks; the other (descent of uterus) had pains in the inside of the thighs, and a feeling of weight in the pelvis, and that only, after fatiguing exertion. Moreover, in diseased states of the uterus, if the morbid condition of the organ is cured, the painful symptoms entirely disappear; and every day's experience proves that all the uterine symptoms may be produced by lesions of the organ, unattended by any displacement whatever, to which they could possibly be ascribed. For the truth of the latter statements, the reporter appeals to his own and to the general experience of the profession.

With regard to the influence of the dilating pessaries on sterility, M. Depaul has similar objections, viz.: that in the facts observed no adequate account has been taken of concomitant pathological conditions; and he maintains that displacements and flexions could only cause sterility when of very old standing, where the uterus is almost always atrophied, and dilatation consequently useless.

Admitting, however, that in a *very small number of cases* the mere displacement of the uterus may disorder the health, or may have an injurious influence on co-existing diseased conditions, M. Depaul believes that there exist numerous efficacious methods of treatment which do not compromise the health or life of patients. Of these means, he enumerates, rest, fixation of the uterus (*immobiliser l'uterus*), taking off the weight of the intestines, avoiding tight-lacing, using hypogastric belts, and lastly, the different pessaries (not intra-uterine) particularly that of M. Garriel, composed of caoutchouc distended by air; also stuffing the rectum in cases of retro-version, as practiced by M. Huguier. He also mentions, the pessaries in whalebone of Dr. Mayer, and that of caoutchouc of M. Joret. He discountenances the use of cauterizations to produce adhesions for the purpose of replacing the uterus.

Cases.—The most interesting inquiry in a practical point, however, is an examination of the *statistics of the treatment by intra-uterine pessaries.* The number of cases published amounts to about 180, and of these, according to M. Valleix, 129 were cured. A result, at first sight so strongly in favor of the treatment, is, however, completely reversed by the history of the cases themselves. The reporter here gives a short analysis of M. Valleix's cases, twenty in number, of five cases by M. Gaussail, and three by M. Piachaud. With regard to Dr. Simpson's practice he was unable to give the results, as that gentleman, when applied to, had, he said, communicated only assertions without proofs; he could only, therefore, give an idea of his success from the information received from indirect sources. It would be tedious to give the whole of these cases; we subjoin a few to show the method of analysis, and how inconclusive the cases are or rather how they are turned into evidence against the treatment they were published to recommend.

Valleix's cases.—Fifth case. C., æt. 31, some years after accouchment suffering from hysteria, leucorrhœa, fatigue in walking, and weight in the pelvis, for which she was treated by repeated leeching. Coming under M. V.'s care in 1851, she was pale and anæmic; the uterus was voluminous, not painful, lying tranversely forward. *On the anterior lip, which was red and voluminous, there was a prominence of a deeper color, presenting in the middle a little white point.* The neck was cauterized on three successive occasions with the acid of nitrate of mercury. Afterwards, catheterism was practised six times, leaving three or four days interval. At the end of a month the uterus was replaced in its normal situation. *The cauterisation was then resumed and repeated thirteen times during nearly two months.* There was no accident, and the cervix was cured. That cure, ascribed to the uterine sound, ought plainly to be attributed to the cauterizations. Several of the other cases are very similar to this.

Ninth case. Anteflexion with hypertrophy, the uterus being heavy, with little mobility, the sound penetrating seven centimetres. The intra-uterine pessary (*redresseur*) having occasioned dangerous symptoms, an energetic antiphlogistic treatment was employed, in consequence of which the patient was cured.

Thirteenth case. Retroversion, and chronic metritis with ulcerations and numerous red granulations. The intra-uterine pessary was applied once, and left in for a fortnight; long after this the patient underwent treatment for anæmia, neuralgia, and for a fissure of the anus which had been overlooked at first. The cervix was cauterized for several months.

In others of his cases there appears insufficient evidence of the state of the uterus, or even of the cure which is reported to have ensued. M. Gaussail's cases are generally complicated with metritis, and such varied and prolonged methods of treatment were used, that it is difficult to ascribe the cure to any one in particular. His fifth case he concludes by admitting that "*the treatment (by intra-uterine pessaries) had produced no amelioration,—the patient felt more fatigued in walking, standing, or by simple movement of the arms. The modifications in the position of the uterus were hardly recognizable. The patient and the medical man were convinced that this treatment could no longer be endured.*" M. Piachaud's cases have already been alluded to. In addition, two cases are quoted, observed by M. Gaube, in which all the morbid symptoms were cured, although the use of the pessary failed to replace the uterus.

The last case given is one of anteversion, where the patient, dismissed cured from hospital by M. Valliex, returned next day in as bad a condition as ever. Scanzoni, in Canstatt's Jahresbericht, states that in twenty cases of displacement, where he tried the mechanical treatment, he did not once obtain a permanent cure. It appears, moreover, that M. Valleix has been continually *improving* the intra-uterine pessary, by diminishing the length of the uterine stalk, till at last he has given it up altogether, and uses only the temporary introduction of the uterine sound, but always, he assures us, with the same successful results.

Having examined the statements of the principal partizans of this mechanical treatment in France, viz.: MM. Valleix and Gaussail, etc., M. Depaul proceeds to show that this treatment has no greater favor or success in other countries, particularly Great Britain. In regard to Dr. Simpson's practice, he quotes from an eye-witness, that although in many cases the relief is immediate, and in a few instances the instrument can be worn with impunity for months or even years, yet in *the great majority* of *females* some morbid state of the uterus or its appendages, etc., comes on; hæmorrhages, rectal fissures, ulcerations of the rectum, metritis, metro-peritonitis, pelvic abscesses, were pretty frequent consequences, and more than once death was the final result. Drs. Churchill, Ashwell, and Gream's statements are quoted as to the dangers of the treatment, together with Dr. Robert Lee's case, where the pessary, or, as he calls it, the impaling machine, was extracted from the uterus. Two fatal cases of peritonitis caused by the pessaries, described by Dr. Oldham; his strongly expressed opinions against the practice; the similar views of Montgomery of Dublin, and Matthews Duncan of Edinburgh, are adduced as strong evidence of the unfavorable estimation in which the practice is held by a large number of eminent obstetricians.

The same objections which have been made to the pessaries are also applicable to the uterine sound or catheter (*hysteromètre*), especially when used to replace the uterus in position. According to Depaul, in the vast majority of cases, it is unnecessary even for diagnosis; it may even lead into error, and its use is not exempt from serious dangers. Guéneau de Musay has recorded a case of fatal peritonitis in consequence of passing the uterine sound; three cases of abortion in the early stage of pregnancy, and one case of abortion and death has occurred in the practice of Huguier, Nonat, and Valleix. M. Depaul then passes under a final review the cases of Valleix, Gaussail, Piachaud, Huguier, Nonat, etc., and finds in nearly every one some of the following results from the use of the intra-uterine instruments: hæmorrhages nearly in every case, and sometimes of dangerous amount; uterine and abdominal pains; rigors and fever; syncope and phlegmonous inflammation around the uterus, or in the iliac fossa; metro-peritonitis. A case of enormous phlegmon in the neighborhood of the uterus is given in detail from M. Cazeaux; one of metro-peritonitis from M. Gaube; six cases (one fatal) from M. Nonat, in none of which was the displacement benefited by the treatment, which gave rise to the dangerous complications, pelvic abscesses, metro-peritonitis, etc.; and this enumeration is summed up by the fatal cases of MM. Broca and Cruveilhier, which originated the inquiry before the academy; followed by four fatal cases from the practice of MM. Valliex, Nelaton, and Aran, and the testimony of M. Maisonneuve that similar accidents have occurred in his hands.

Conclusion.—In the majority of females, uterine displacements do not injure the health, and constitute a mere deformity without importance. Where displacements co-exist with inflammation or neuralgia, when the latter affections are cured, the former disappear, or if they persist, are quite innocuous.' The small number of simple displacements which occasion inconvenience are easily and safely treated by simple methods without incurring the dangers of the intra-uterine instruments, which, even when they momentarily replace the uterus, fail to fix it in the normal position. The facts adduced to show the efficacy of the mechanical treatment have been wrongly interpreted, and the cures ascribed to it have been owing to other means employed at the same time. The fatal cases observed both in France and England are numerous enough to show the perils of this treatment, and to warn its boldest partisans. In addition to the mortality, the other dangers are of the most alarming kind; pains—sometimes agonizing, hæmorrhages, anæmia and nervous disorders, rigors, fever, syncope, peritonitis, pelvic abscesses, metro-peritonitis, etc., not to mention the cases where the treatment could not be endured. The uterine sound, of great advantage in the diagnosis of certain affections, is very often of no service, and from the great risks attending its use, should be reserved for the exceptional cases which require it; and, finally, that the different intra-uterine pessaries ought to be proscribed, because they are useless, and impotent to produce the good effects expected from them, and they subject the patients to the most serious dangers.

THERAPEUTICS.

Metallic Mercury in Ileus and Obstinate Constipation.—Franceschini has collected 13 cases in which this substance was used in doses varying from 50 to 300 grammes, and concludes:—1. That the internal use of metallic mercury in constipation and ileus has produced good results in overcoming the intestinal obstruction. 2. That the most obstinate vomiting has always been arrested. 3. That it has never produced local injury of the bowels. 4. That it has never proved injurious to the system, either immediately or remotely.

Lactate of Iron with Antispasmodics in some Neuroses.—Dr. Marchiandi has found the following formula very useful in neurosis, dependent upon onanism, gastralgia, epilepsy, etc. ℞ = Valeriante of zinc ʒij; lactate of iron, ʒiss; ext. belladonna, ʒss; ext. valerian q.s.lb. make 60 pills; patient takes two for the first two days, and afterwards gradually increases the dose.

Cubebs in Incontinence of Urine in Infants.—Dr. Driters believes that nocturnal incontinence of urine in children is due to atony of the neck of the bladder, in which no remedy has greater power than cubebs. As relapses are frequent, this remedy should be continued several weeks, giving it two or three times daily in large doses, but suited to the age of the patient.

Collodion in Orchitis.—Prof. Costes relates cases of this disease in which, after covering the scrotum with a mixture of 20 parts of collodion and 6 of ol. ricini, the swelling and pain were quickly relieved, and a rapid and complete cure was obtained.

Gutta Percha.—M. Ellefsen recommends a solution of this substance in swelled testicle and fresh wounds, on account of its adhesiveness and making an air-tight covering. He dissolves the gutta percha in bisulphuret of carbon, and spreads the substance over the part affected. It immediately becomes dry and stiff, and forms a thin, tight, and adhesive covering, which loosens at the edges after three or four days, when it must be repeated.

Turpentine Bath.—Dr. Moreau speaks highly of a bath in turpentine vapor, in catarrhal affections, rheumatism and severe neuralgias. The patient is shut in a room into which the vapor is introduced from without—varying in temperature from 45 to 102 degrees. It produces copious perspiration, which greatly diminishes the temperature of the body.

Creosote in Intermittent Fever.—Zwetkoff was induced to make a trial of creosote in intermittent fever, (1) On account of its specific influence over the abdominal ganglia of nerves, especially the solar plexus, and (2) On account of its good effects in periodical vomiting. He gave it in doses of from 9 to 15 drops, three times per day in mucilage.

Acne.—Cazenave has recently recommended ammoniacal lotions, which form with the fatty matter of the follicles a soluble soap with an ammoniacal base; the hydrochlorate or acetate of ammonia answers equally well.

Chronic Papular Eruptions.—Dr. Burgess considers them to consist of disorders of the cutaneous nerves, and prescribes, in severe cases of prurigo, strychnia and phosphorus; he has found phosphorated ether, preceded by repeated doses of hyosciamus for a day or two, succeed in allaying obstinate pruritics, given internally.

Nitric Acid in Hooping-Cough.—Dr. Gibb, in a recent work on this disease, recommends very highly nitric acid given as follows: ℞. acid nitric. dilut. (Lond. Phar.) ʒxij; tinct. cardam. co. ʒiij; syrup simplex, ℥iijss; aqua, ℥j. m; dose, a dessert spoonful every hour or two to a child two years old.

PART FOURTH.

AMERICAN MEDICAL RETROSPECT.

PRACTICAL MEDICINE.

Powerful Effects from small Quantities of Opium and certain of its Preparations.—**Dr. Morland** relates a case (*Am. Jour. Med. Sci.*) of poisoning by five grains of opium, and adds the following remarks: —Although the quantity of opium absolutely requisite to suspend vital action must always vary with circumstances, and often, especially, by the habits of the individual, even the quantity taken in this case might well enough have been fatal, under the existing conditions. **Christison** has recorded a case in which four and a half grains, combined with nine grains of camphor, were fatal in nine hours. Under other circumstances, doubtless, five grains would hardly have caused such very marked effects as have been above related. The prolonged effect of so little, comparatively—the excessive resistance to purgative agents and the long-continued *after* influences (not certainly very usual after recovery from the immediate effects), may seem of sufficient importance to warrant a report of the case.

Dr. Christison opportunely draws attention to the importance of knowing, approximately, the *smallest fatal dose;* for, says he, "in consequence of the dread entertained by many unprofessional persons of this drug, it is currently believed to be much more active than it is in reality, and instances of natural death have been consequently imputed to medicinal doses, taken fortuitously, a short time before (*op. cit.* p. 657). The recording of such powerful effects as are occasionally observed from small quantities even, of opium and its preparations, may also be of service by inducing greater caution in the use thereof, without medical advice and prescription; it may tend to prevent the keeping of such potent remedies in places where mistakes are liable to be made, and where reckless use of the drug is possible.

Grisolle states that "he saw narcotism induced in a lady by the ingestion of three centigrammes of opium;" the *centigramme* being about one-sixth of a grain, this would give only *half a grain* for the quantity taken. The same author adds that twenty centigrammes (grs. 3) have sometimes killed *adults*, and that one or two drops of laudanum may cause the death of a new-born infant. (*Path. Int.*

vol. i. p. 827). Laudanum has been said to become stronger by *being long kept*; Dr. Bigelow, Sen., declares this to be incorrect, at least when dropped without shaking;—if the sediment be stirred, a *very slight* increase of power is possible. Orfila (*Dict. de Médicine*, p. 261) says: "I have seen all the symptoms of an extremely severe (*pénible*) narcotism experienced by two young ladies, after the application of opium plaster to the temples." He does not state the proportion of opium used in preparing the plaster; certainly the amount absorbed must be, comparatively, very small. Taylor (*Medical Jurisprudence*) gives a case as occurring in 1838, of a man, aged 45 years, who died from the effects of ten grains of solid opium which he had swallowed. Also, another instance, in which eight grains proved fatal to a woman, 38 years of age; the quantity, moreover, was taken in two doses. Interval not given.

Many authors refer to the fact of very powerful and alarming effects upon young children by exceedingly small doses. Orfila cites the statement of Sundeling, "that the smallest doses (*les moindres doses*) act with activity in infants; the works of medical authors abound (*sont remplis*) with facts which support this opinion." (*Dict. de Médicine*, en 30 vols. p. 259). Members of this Society have, in former years, reported very marked instances. Dr. Hale related the production of narcotism in a child one month old, by one-twentieth of a grain of acetate of morphia. The same gentleman also stated the occurrence of "alarming" narcotism in a child, from taking one drop of laudanum; and said, moreover, that he had witnessed in another child the same symptoms, after the use of "cough mixtures" containing minute quantities of opium, in some form; and again, by "cough lozenges." Dr. H., from observation of many such instances, concluded that opiates have a greater effect upon children, in proportion to the quantity taken, than does any other medicine. (Vide *Records of Society*, 1843). With a view of presenting the results of several cases of poisoning by preparations of opium, so many as it is possible to collect by search of the volumes of past records, will be grouped in a tabular form below; among them are other examples of strong narcotic action from minute doses, and especially in infantile cases. In consequence of the loss of one volume of the Society's *Records*, any cases therein cannot be cited; one or two are not tabulated, from want of precise data. It is believed that all but two or three are given.

While referring to cases observed in children, one published by Dr. Edward Smith, of London, in the April number of the *Association Medical Journal* (London), may be mentioned. In this instance, one-twentieth of a grain of opium proved fatal to an infant six days old, in eighteen hours after the administration of the dose. Syrup of opium, of the French Pharmacopœia, was the preparation; three-fourths of a grain of crude opium to the ounce of fluid. Artificial respiration was most efficient towards keeping up the action of the heart, which latter was quickened or slackened, according to the use of this means. The usual symptoms of poisoning by opium were induced in about half an hour, coma closing the scene.

In 1838, at a meeting of the Society, Dr. G. C. Shattuck, Jr., while referring to the liability of children to be even killed by very small quantities of opium, remarked that, in adults, the habit of drinking ardent spirits may have some effect in diminishing the susceptibility to the action of opium. Dr. S. at that time asked Dr. Bigelow, Sen., what he would consider the minimum fatal dose of opium or laudanum?

Dr. **Bigelow** replied that, according to the Edinburgh Dispensatory, it is about four grains of opium, or one hundred to one hundred and twenty drops of laudanum. He added, that he had previously stated to the Society the occurrence of several cases in which an ounce of laudanum had been taken with impunity. (*Records*, 1838).

An important question, in all cases, is the *quality* of the preparation, and as laudanum is perhaps most commonly used for suicidal purposes, we observe, oftenest, variations in the effects of large and of small doses; idiosyncrasy in individuals is a more rare, but doubtless not an infrequent element in the wide difference of the action of the drug.

A case was some years since reported to the Society by Dr. **Charles E. Ware**, in which ℥ij of laudanum were taken by an adult female, entire recovery ensuing; she was not in the least narcotised, but, on the contrary, was highly excited; there was spontaneous vomiting. She bought the tincture at two different druggists. It is very possible that an inferior quality of laudanum was dispensed; indeed, with a superior kind, her escape would have been extraordinary.

In the case which forms the basis of this paper, attention may be directed to the profuse *diaphoresis*. This is remarked by Christison in a fatal case examined by him. "The sheets," he says, "were completely soaked, to a considerable distance around the body." This effect of opium has been lately referred to in the Society, when it was administered, in the ordinary doses, frequently repeated, in inflamatory affections; diaphoresis being often obtained very readily, although some have supposed its use would tend, constanly, to constrict the skin.

On the Use of Quinine in the Treatment of Cholera Infantum. By Delaskie Miller, M.D., Chicago, Ill.

The almost uniformly intermittent character of the symptoms is a circumstance of practical importance, which affords indications of treatment in other diseases. And although this feature in the symptoms of cholera infantum has been noticed and described by almost all writers upon the subject, still it does not seem to have had any part in furnishing the indications of treatment in this. We would naturally have expected, that when the *important symptoms* so uniformly correspond with those of other intermittent diseases, that the *efficient anti-periodic* remedy would at least have had a trial.

Besides, the intermittent character of the symptoms, there are other and important considerations, which indicate the use of quinine in this disease. It will be borne in mind that in the hasty review which we have just concluded, reference was made to the derangements of the liver and its function. This is what we should expect, when malaria has produced its peculiar influence upon the system. Headland has advanced the doctrine that in all cases where quinine is indicated, there is a failure in the secretion of healthy bile, and in all cases where there is this failure in the secretion of the bile, quinine is indicated. So there appears to be some connection between these conditions and the effects of quinine.

The bile is formed from the blood, the principal constituents of which are reabsorbed from the surface of the intestines, little more than the coloring matter being excreted from the system. One of these constituents, and a very important one is *Taurine.* M. Leibig has pointed out an important similarity between taurine and the vegetable alkaloids. Of these, caffine, the peculiar principle of coffee, is nearly analogous. From the analysis of these two substances, this author has adduced the following formula: Taurine, $C_4\ H_7\ NO_{10}$. Caffine, $C_8\ HN_2\ O_2$.

He then shows that one atom of caffine, if added to nine of water and nine of oxygen, will form two atoms of taurine; and it is not at all unreasonable to assume that such a change may, and usually does take place in the system; and thus form a necessary element to the blood in health. This gives us the rationale of the effects of a strong decoction of coffee in the treatment of cholera infantum, as first recommended by Dewees, whose favorable opinion of its beneficial effects all experience sustains.

Taurine is soluble in water, and crystalizable, is chemically analogous to the tonic bitter principles, and contains the same four elements as quinine. If necessary, this similarity could be exchanged for identity, and quinine could be changed into taurine in the blood. If there is one physiological process which is performed with greater facility in the system than any other, it is the process of oxydation; oxygen produces its effects through the external surface, it is admitted largely through the lungs, and it is received into the system with the ingesta. Now the formula for quinine is, C_{20}, H_{12}, NO_2. Adding to this 45 atoms of oxygen, makes one atom of taurine, 16 of carbonic acid and 3 of water. This process it will be seen supplies an important material to the blood, and supports animal heat by giving off carbonic acid, exactly what is necessary in the treatment of cholera infantum.

From what has been said it will be seen that we regard cholera infantum as a Pyntic disease, as do the highest authorities upon the subject. We assume that it partakes of its intermittent type, in consequence of the influence of malaria upon the system. That, then, there is serious derangement of the hepatic function. That in some cases there is simple congestion of the mucous membrane of the stomach and bowels, such as frequently occurs in remittent fever. These circumstances force us to the conclusion that quinine is indicated in the treatment of this disease, and not merely for its tonic influence, but for its anti-periodic effect.

The proper period for administering quinine in the treatment of this disease, is a point of the greatest importance. Of course we could not expect to arrest the diseased action and remove the organic lesion which occur in the advanced stage by the use of quinine, if given even in a full anti-periodic dose. But to secure the full benefit of this remedy, it should be administered early in the disease, and it will be best tolerated if given during a remission, as in the case with this remedy in remittents generally. The amount necessary to be administered must of course vary with the age of the patient, and to some extent with the violence of the attack. When given, a sufficient quantity should be administered in as short time as possible, in order to promptly arrest the periodicity, and it will be of importance to remember that quinine is best borne, when given in solution, and largely diluted. Should it not be retained in the stomach, we may secure quite as prompt and certain effects by using it endermically, or by enema. When administered in the latter mode, three times the quantity will be required that we would give by the mouth.—*Peninsular Journal*

Catarrhal Fever of Infants. By EDWARD B. STEVENS, M.D.—In different sections of this country, and at various times, a form of disease has appeared, which has been treated of with considerable niceness of detail, under the title of "*Epidemic Meningitis.*" In many respects the affection under consideration bears a striking resemblance to the Epidemic Meningitis, so described. A large proportion, or most of the children I have seen, prove fatal cases of *Catarrhal Fever*, have evidently been hydrocephalic towards that termination. In the progress of the case, there have been convulsions, incessant rocking of the head, peculiar dark-green-paint stools, and stupor,—giving evidence of a certain degree of meningeal inflammation, but none of them have been *purely* or chiefly of that character.

Other features of these cases constitute, almost essentially, simply bronchitis. Thus, running through some portion, or perhaps the greater part of the progress of the case, we shall have cough, mucous rattle, pain, the pulse quick and sharp—often up to 150—and yet the case is *not* bronchitis, simply nor chiefly, for in many respects it is different. Infantile bronchitis is very happily presented in the Treatise on Children, by Dr. Condie; and, indeed, I have not seen any recent work which gives such clear and satisfactory details of the nature and treatment of this, and many other infantile diseases. In nothing, however, do I find what seems to me to be a satisfactory view of *catarrhal fever*, treated as a unit.

Catarrhal disease is supposed to result from some peculiar atmospheric influence: in a simple attack, generally passing under the indefinite name of a "bad cold," sometimes epidemic in a whole neighborhood or country, and often very peculiar in its appearance or type. When the especial cause of catarrh, however, attacks the delicate linings of the nostrils and frontal sinus, there is produced what we call *coryza.* If it passes towards the brain, we have some form of *meningeal disease*, with fever of a low grade, and stupor or convulsions, perhaps. If it passes along the throat and invades the lungs, or makes its first invasion there, we have *bronchitis* or *pneumonia;* or, should it, as it sometimes does, affect the mucous coating of the bowels, it may produce a *catarrhal diarrhœa.* Now, these are all forms of catarrhal disease, well understood by the profession, easily recognized, and, for the most part, the therapeutic indications are manifest enough.

I am well satisfied, however, that there is a more complex form of catarrh, wherein *all these important regions* become invaded, apparently at the same time, or nearly so, and the vital forces give way with a predestined sureness and rapidity. From an anxious observation of many of these cases, I suppose there is oftentimes a simultaneous attack upon brain membranes, nasal linings, bronchial passages, mucous coatings of the bowels, and the cutaneous surface, and the whole group of consequent symptoms, constituting *proper* "*catarrhal fever.*"

I do not forget that it may be urged with good reason, that whenever disease so impairs the function of respiration as to deteriorate the quality of the blood, the *brain*, *at once*, gives *apparent* evidence of disease, owing to a want of its accustomed nutriment, and the presence of excessive carbon; hence, stupor and convulsions, without any primary attack upon the brain or its membranes. And yet, we know very well that an aggravated pneumonia or bronchitis may exist in a child or adult, and no such sympathetic condition of the brain appear; so that, while this active sympathy may, and often doubtless does exist, it is not a *necessary* condition. I do not, therefore, regard this as any forcible contradiction of the view I have taken of the real nature of *catarrhal fever*.

The history of one of these little cases is something like this. If called early to see the patient, we will doubtless be told by the mother. that "her child has a *bad cold*." Upon examination of the case, there is some cough, slight febrile condition of the skin, and increased frequency of the pulse; but if these symptoms are not promptly controlled, or, what is often the case, if attention is not called to them in this state, symptoms of a much more aggravated character come up; there is stupor—frequently convulsions—hot dry skin—and pulse from 140 to 160—cough and mucous rattle, with a labored panting respiration; there is generally evidence of pain, but, with patients so young there is difficulty in ascertaining its extent or character. Other cases present these worse features from the onset of the attack, and leave no evidence of any primary point of the invasion. I have found such cases, I think particularly, portend, for the most part, a fatal issue. Sometimes, after a few days, the mucous rattle would seem to give way, and a pleasant character of easy expectoration follow—the expression of the countenance becoming more intelligent and bright—with a pulse reduced from 160 to 120; and with such a condition of things lead friends and physicians to anticipate a speedy convalescence; but how deceptive these flattering indications prove! for other times, in less than twenty-four hours, and with no apparent cause, stupor and convulsions return—pulse becomes perfectly wild—skin dry and glistening, and death speedily relieves its little suffering victim. In the treatment of these cases, I have sought to secure a healthy state of the secretions, among the first and most important points.

Calomel and *Ipecac*, in small doses, has often had a satisfactory effect, acting at once as an alterant and diaphoretic; but owing to an obstinate degree of torpidity of the bowels, very often, perhaps *usually* present in these cases, I have found it seemingly impossible to make any impression upon the liver, or secure stools of a healthy appearance. With the *cathartic* I usually direct the *warm bath* and full *counter-irritant* applications. *Musk*, given in the solution directed in U. S. Dispensatory, I have found to exert a good controlling influence on the tendency to convulsion; *cold* to the head; *sinapisms* and *blisters* to stomach, extremities, and back of the neck; torpid bathing, and sponging the surface; stimulants and diaphoretics—all seem so variously called for, that no brief paper would suffice to point out the details of their indication.—*Western Lancet.*

Use of Refrigerants in Dysentery. By J. P. Mettauer, M.D.—I think the fears entertained against the use of refrigerants in dysentery by some of my brethren are groundless, judging from my own trials of them in numerous instances; and I again commend them to the profession, not only as valuable, but safe auxiliary therapeutical means in treating that painful and dangerous disease, notwithstanding the condemnatory dissent of Dr. Upshur, in his paper "Hospital Practice," published in the 14th number of the Virginia *Med.* and *Surg. Jour.*

Surely a large majority of upwards of 300 cases of dysentery treated by myself, in which ice and cold drinks were freely used without injury, is a strong argument against their pernicious operation in that disease as a general effect.

In the first case of dysentery reported in this paper, although considerably advanced when the pounded ice and cold drinks were used, nothing unfavorable to the condition of the patient resulted. On the contrary, he was relieved of a most distressing and alarming symptom by them, to wit: internal burning heat, and in other respects was greatly comforted and benefited; and this was a case in which refrigerants would be most likely to operate prejudically, because of the debility of the patient when they were commenced with.

In the early or inflammatory stage, before the energies of the system have become exhausted, refrigerants would not be likely to depress the vital powers to a dangerous extent, and they would also act beneficially in combating inflammation and its attendant fever—while in the latter or depressing stage, they might increase the depression, and in that way endanger, which is the only mode by which they could possibly produce injurious effects in any disease.

In the second and third cases, refrigerants were used in the early stage, while the symptoms were decidedly acute, and with the effect of appeasing thirst, but without, in the least degree, increasing the tormina. These attacks were promptly relieved by free purging, and only one cathartic was required in each case.

With the fourth case refrigerants were employed also, and without the slightest increase of the tormina, or any other untoward effect following, although the patient had become greatly prostrated, and strong threatenings of mortification had manifested themselves.

The recovery of this patient was mainly due to revellents and the prompt induction of ptyalism. It is true, great relief was experienced from the laudanum and starch injections, as well as from the narcotic astringent pills and carbon. But, from the first appearance of the salivation, the amelioration of the symptoms was most strikingly displayed. The carbon should never be omitted in the treatment of dysentery, especially when the dejections are fœtid. Besides its power of correcting the fœtor of the contents of the bowels, it also exerts restraining and secerning effects. It is often the case that free and comparatively feculent dejections make their appearance after several doses of carbon have been taken.—*Stethoscope.*

MISCELLANEA.

FLUID EXTRACTS OF MESSRS TILDEN & CO.—We have had recently submitted to us for inspection and use, samples of fluid extracts of Buchu, Rhei, Senna, Cinchona, etc., which, after trial in practice, we have no hesitation in pronouncing reliable and exceedingly worthy of the attention of the profession. The advantages of fluid extracts when properly prepared, does not admit of question; their freedom, more or less, from Alcohol, the smallness of the dose, and the absolute certainty of the medicine, renders them justly deserving of the attention of the profession and of the favor of the public.

OBITUARY.

DEATH OF DR. W. I. BURNETT.—The death of this distinguished physician and naturalist, was noticed in our last. At a meeting of the *Boston Society of Natural History*, July 19, Dr. Wymans, in accordance with a vote passed at a previous meeting, read a notice of the life and writings of Dr. Burnett, who had been a prominent and efficient member of this Society. From this notice which was subsequently published in the *American Journal of Science and Arts*, we glean the following facts :—

WALDO IRVING BURNETT, was born in the town of Southboro', Mass., July 12, 1828. His father was a physician, and passionately fond of natural science. His love of nature he transmitted to his son, who early began to study natural science and especially insect life, and so absorbed did he become in these pursuits, that his father was obliged to exercise some restraint. He was induced to forego the advantages of a collegiate education, owing to his father's restricted means, but nevertheless by unaided efforts he became proficient in mathematical studies, and mastered the French, Spanish, and German languages, and had made some progress in Swedish. He commenced the study of medicine at the age of sixteen; and his father dying soon after, he was left to maintain himself by personal exertion. He spent most of his studentship with Dr. Joseph Sargent, of Worcester, devoting much attention to entomological pursuits, and graduated in 1849, at the age of 21. He had already distinguished himself as a successful student in the Tremont Medical School, and the Mass. General Hospital, and by being twice the successful competitor for the Boylston prize essay. Soon after graduation, he visited Europe, but owing to the appearance of symptoms of phthisis, he was compelled to return after an absence of only four months. He now visited the Southern States, where he afterwards passed each successive winter either in Carolina, Georgia, or Florida. To mitigate the progress of his disease he was now forced to travel from place to place, having no permanent home. But while thus unsettled he seems to have accomplished an incredible amount of labor; he was incessantly occupied with his microscope, and his mind was ever on the alert.

In the winter of 1851, he delivered at the Medical College, Ga., a course of lectures on microscopical anatomy. In the summer of 1852, he prepared the principal work of his life, the essay which received the prize of the *American Medical Association.* He became an active member of the *Boston Society of Natural History* while a student, and in 1851, he was elected a member of the American Academy of Arts and Sciences,—one of the youngest members ever admitted into that body. His contributions to different scientific bodies and journals were very numerous, and on a great variety of subjects. He became one of the associate editors of the *American Journal of Science and Art,* and was accustomed to contribute *reviews and records in Anatomy* and physiology, consisting of a critical analysis of the periodical literature of these subjects. While actively engaged in these various pursuits, Dr. Burnett found time to undertake the translation of Siebold and Stannius' Comparative Anatomy, the first volume of which has but recently appeared, and bears internal evidence in the compendious notes of its editor, of great labor and research. He was engaged upon the second volume at the time of his death, and was anxious to see its completion.

The final close of Dr. Burnett's life is thus drawn by his biographer:—

"He had been long accustomed to look upon death and to talk about it as an event that he must meet at an early period. But death, if not imminent, is something that all look forward to calmly and without emotion, and when we speak of it we are not sure that we give utterance to our most solemn feelings and convictions. But there is one moment when, if ever on earth, the heart, if it opens itself, does so without disguise—if it give utterance, does so without reserve: it is that dread moment when death approaches so near that there is no alternative but to look upon earthly life as finished, its account made up; and when all that remains for the mind to dwell upon is the dissolution of the body and the realization of another life. A few days before he died, our late associate returned after a winter's absence, to the home of his family, his bodily health exhausted, his energies prostrate. At first he entertained the hope that as before, rest and quiet might restore him partially at least to his usual health, and that he might have yet another opportunity of continuing those labors which he so fondly cherished; but his fast declining strength, the anxiety of those around him, the announcement of his physician and his own quick perceptions, soon told that life was drawing to a close, and that for him the great moment was near. In all this he was calm and serene, conversed on the approaching separation without faltering, gave utterance to expressions of deep affection to those who were bound to him by the ties of kin, uttered his prayer for forgiveness, and expressed the solemn conviction, which now rose paramount to every other, that if there yet remained much for him to live for, there was yet far more to die for. On Saturday morning, July 1st, a few days before the completion of his twenty-sixth year, he died."

DEATH OF PROF. JAMES WEBSTER, M.D.—Dr. Webster died in the City of Louisville, Ky., July 19th, 1854, of disease of the heart, in the 51st year of his age. From a biographical sketch in the *Boston Med. and Surg. Journal* we learn that he was born at Washington, Lancashire, Eng., on the 26th of Dec., 1803. At an early age he emigrated to this country with his parents, and settled in Philadelphia, where his father became an eminent bookseller and publisher, and established the Medical Recorder, of which his son became afterwards one of the editors. Dr. Webster was originally destined for the bar, but his inclination soon led him to the study of medicine, in which anatomy soon became his favorite pursuit. He pursued his studies in Baltimore and Philadelphia, and after attending three full courses of lectures, two of which were in the University of Pensylvania, he graduated at the latter in March, 1824, at the age of 20 years. Dr. W. was a private student of the late Dr. John D. Godman and succeeded him, on his removal to New York, as private teacher of anatomy.

As a successful teacher of anatomy, Dr. Webster had few if any superiors in this country. He was clear, precise, and accurate, and always enjoyed a high degree of popularity with his students. His private classes in Philadelphia were crowded, and he succeeded in imparting to his students the same enthusiasm which he himself felt in the study of his favorite science.

About the year 1835 or, 36, he removed to the city of New York, where he soon acquired considerable reputation as an operative surgeon, and especially in the treatment of diseases of the eye and ear. In 1842 he was appointed Professor of Anatomy in Geneva Medical College, and took up his residence in the city of Rochester—where, in a short time, he became one of the most prominent surgeons in western New-York. In 1849 he was elected to the Chair of Anatomy in the University of Buffalo, where he continued to lecture until 1852, when he resigned from ill health.

Dr. Webster was a man of superior native abilities, and of extensive acquirements in anatomical science. He was exceedingly fluent and animated as a teacher, and never failed to command the whole attention of his class. His mode of teaching was that pursued by the late Dr. Godman, viz., to perform all the dissections before the class, demonstrating all the parts as he went along. Such was his great skill and facility in dissecting, that he usually went over more ground in a single lecture, than when the parts are previously dissected. The advantages attending this mode of teaching are sufficiently obvious.

As a surgeon, Dr. Webster was cautious, though bold and prompt enough when the occasion demanded. He was a neat operator, gentle and kind in his deportment to his patients, and remarkably successful. As a lithotomist and an oculist, he was one of the most skilful operators in western New York, and performed a vast number of operations of every kind.

Dr. W. was a man of fine social qualities, open, frank, and gentlemanly in his manners, and generally conciliating in his deportment. He was generous to a fault, and with some failings, possessed equally great virtues. The thousands of medical men who have enjoyed the benefit of his teachings will hear of his death with regret.

DEATH OF SAMUEL W. MOORE, M.D.—Died in this city, on the 26th day of August, Dr. S. W. Moore, aged 68 years. The following biography is from the pen of Prof. C. R. Gilman, and is copied from the *Medical Times* for October:—Samuel W. Moore was born in New York city, 11th October, 1786, the son of Dr. William Moore, long one of our most highly-esteemed and successful practitioners. From early childhood his constitution was frail, and the delicacy of his bodily organization was equaled by the gentleness of his temper, and the kindliness of his feelings.

Dr. Moore received his early intellectual training from Mr. Samuel Rudd, and entered Columbia College at the age of sixteen years, in 1802. His connection with Columbia College was probably rendered more pleasant and profitable by the fact that his uncle, Benjamin Moore, D.D., Bishop of New York, was then president of the institution. Several of his classmates still survive among us, and we noticed two of them among the sorrowing friends who assembled at his funeral. He graduated in regular course in 1806, and immediately commenced the study of medicine, under the guidance of his father, attending lectures in the medical department of Columbia College; in which Dr. Wright Post then taught Anatomy, Dr. Richard Bailey, Surgery, Dr. Hammersley, Theory and Practice of Physic, Dr. J. R. B. Rodgers, Midwifery, and Dr. David Hosack, Botany. From those distinguished teachers he received, in 1810, the degree of Doctor of Medicine, and immediately entered into full practice, taking a share of the large business of his father. This arrangement continued until 1824, when the elder Dr. Moore died, having practised physic forty-four years. His son now took his place among the prominent physicians of New York, with a large circle of patients, and a still larger one of friends; for such was the unaffected kindness of his heart, and such the graceful amenity of his manners, that few became his patients without remaining ever his attached friends. In 1824 he was appointed one of the physicians of the New-York Hospital; for this situation he had moral qualifications which are more important, and alas! more rare, than professional skill. His conscientiousness insured to the poorest and most degraded of his pauper patients a full measure of his attention; while his amiability and benevolence made him the friend of poor and rich alike. In 1828, he was compelled, by failing health, to retire from a position which he was so well fitted to adorn.

In 1828, Dr. Moore was appointed Trustee of the College of Physicians and Surgeons, and continued, from that period to the end of his life to take an earnest interest in the prosperity of that institution.

At the time of his death, he was the senior member of the board. In 1849, on the reappearance of the cholera, Dr. Moore, in conjunction with his friends Dr. Joseph M. Smith and Dr. John B. Beck, was appointed medical counsellors to the Committee of the Sanitary Board of Health. To the duties of this position, made more onerous by the fact that his associate Dr. Beck was soon, by the state of his health, disabled from taking his share of them, Dr. Moore devoted all his energies; and the Report published by the Committee affords most satisfactory evidence of the ability and faithfulness with which this important public duty was performed. For several years, the health of Dr. Moore, never very robust, had been gradually declining, and he felt himself obliged to contract the sphere of his professional labor. Still he was unwilling entirely to give up the practice of his profession, and very many of his old friends were still more unwilling to be given up. In March last he met with an accident, which, though not immediately followed by grave symptoms, caused, as afterwards appeared, effusion of blood into the cavity of the arachnoid. He continued to visit a few friends, and his venerable form was still seen at church, till in July, paralysis very gradually supervened, and then

> "Gently as an infant to his sleep,
> Went he to death."

Death of Prof. J. A. Swett.—Died in this city, Sept. 18th, John Appleton Swett, A.M., M.D., Professor of the Practice of Medicine in the Medical Department of the University of the city of New York, aged 46 years, of Bright's disease. "Dr. Swett was born in Boston, Mass., in December 1808. He received his academical education at the University of Cambridge, Mass., having entered that institution in 1824, after a thorough classical training at the Latin School of Boston, and graduated with honor in 1828. He then at once commenced the study of medicine in the office of Dr. Jacob Bigelow, of Boston, and at the end of three years, received the degree of Doctor of Medicine. In the selection of a place for the practice of his profession, he visited New York in the fall of 1831, and soon decided to make this city the scene of his future labors. In this decision he was not sustained by the wishes of his parents, then residing in Boston, which made the early years of his professional life a period of struggle and of no little anxiety. His zeal for study soon led him to seek other means of improvement than those afforded by the slow growth of private practice, and he attached himself to the New York Dispensary, the oldest and most extensive of the charities of our city. Years of toil and industrious application in this great field for the study of disease in all its forms, afforded by the large number of patients at the institution, yielded rich returns, and probably both gave a direction to his future course, and laid the foundation for the reputation and success with which he was afterwards rewarded. He then commenced especial examination of the subject of diseases of the heart and lungs, a department with which his name soon became associated, and upon which his labors threw so much light.

In the winter of 1833–34, he was one of a small number who united to form an association for professional improvement at the New York

Dispensary, which, after some changes, assumed the form and name of the society now known as the New York Medical and Surgical Society. With this association, his feelings and sympathies were always closely identified, and he contributed much to the pleasure and profit of its meetings. The members of the society, now numbering between twenty and thirty, all actively engaged in professional duties, attended as mourners at his funeral.

In 1834, he superintended the publication in this city of "Hall on Diagnosis," a second edition of which, with notes, he published in 1839. In July, 1835, he visited Europe for professional improvement, and diligently availed himself of the advantages afforded by a residence in Paris, returning home after an absence of eighteen months, and entering with renewed zeal upon his course of study and practice.

In the Spring of 1838, he commenced his career as a lecturer, at the Broome Street School of Medicine, an association formed by a few of the junior members of the profession, for the purpose of giving instruction on special branches of medicine and surgery, selecting for his department his favorite subject of diseases of the heart and lungs, with which his reputation became afterwards so intimately connected. He subsequently lectured on the same subject, with great increase of favor, in the Spring course of lectures at the College of Physicians and surgeons, in Crosby street. The report of his lectures in the New York Lancet at that time, did much to extend his fame as a teacher and a lecturer, beyond the limits of the city as well as at home.

In 1839, he and Dr. John Watson were associated as editors of the New York Journal of Med. and Surg., which was conducted by them jointly, with ability, for two years, when the enterprise was abandoned, after the publication of four valuable volumes.

In the year 1842, Dr. Swett was elected one of the Physicians of the New York Hospital, with a unanimity highly flattering to him, and with a hearty response on the part of the profession, as to his peculiar fitness for the station. This was the scene of his subsequent and of his latest professional labors, and he rendered it attractive to students, as well as to practitioners, by his accurate pathological demonstrations, and his clear and judicious clinical instruction. His devotion to his duties in connection with that institution, and especially during the last spring, when exhausted by the labors of the winter, doubtless tended to hasten the event which we are now called upon to mourn.

In 1852 Dr. Swett published a revised and extended edition of the course of Lectures delivered in 1838, in a separate volume under the title of "*A Treatise on the Diseases of the Chest*," an octavo volume of 585 pages, with two plates on steel. It is upon this work that his reputation as an author will rest for years to come.

" In the summer of 1853, Dr. S. was chosen Professor of the Institutes and Practice of Medicine in the Medical department of the University of this city, and lectured during the past season in that institution with great acceptance. This appointment enabled him to realize the hopes in which he had long indulged, and rendered available for the benefit of others the valuable acquirements of long years of devoted study.

The post-mortem examination confirmed the diagnosis of his disease made during life. Both kidneys were found in an advanced state of Bright's disease, and the liver in the second stage of cirrhosis. All the other organs were sound.

In the death of Dr. Swett, we feel that the profession has sustained no ordinary loss. An honorable man, and an accomplished physician, he had secured the confidence and commanded the respect of his brethren to a degree rarely met with, and it is no disparagement to those whom he has left behind, to say that as a teacher and clinical lecturer, he had no superior among us.—*Medical Times.*

Resolutions of the Medical Faculty of the University of New-York.

At a meeting of the Medical Faculty of the University of the City of New-York, held Sept. 19, 1854, the death of PROFESSOR SWETT having been announced by the President, the following preamble and resolutions were adopted.

WHEREAS, It has pleased Almighty God to remove from among us our late Colleague Professor John A. Swett:

Resolved, That the members of the Faculty have heard, with profound regret, of the decease of their late Associate.

Resolved, That, in view of the accurate and extensive scientific acquirements, the professional sagacity and skill, the aptitude to teach and the gentlemanly and honorable deportment of the deceased, and the pleasant relations which have uniformly subsisted between him and his Colleagues, the members of the Faculty regard his death as a severe loss to the University, the Profession, and the Community.

Resolved, That, in honor of his memory, the members of the Faculty will wear crape on the left arm for 30 days.

Resolved, That the members of the Faculty will attend the funeral of their late Colleague.

Resolved, That the exercises at the University Medical College be suspended until after the funeral of the deceased.

Resolved, That a copy of the foregoing preamble and resolutions be sent to his Widow, with the sincere condolence of the Medical Faculty.

Resolutions of the New York Medical and Surgical Society.

At a special meeting of the New York Medical and Surgical Society, held on the evening of Sept. 19th, 1854, the following resolutions, offered by Dr. E. L. Beadle, were unanimously adopted:—

Resolved, That we are deeply affected by the dispensation of Divine Providence which has, by death, removed from our companionship John A. Swett M.D., one of the founders of this Society; a member who was not only distinguished for his clearness of perception, soundness of judgment, devotion to, and eminent attainments in, his profession, but was endeared to us all by his urbanity of manner, honorable deportment, truthful character, and ardent friendship.

Resolved, That as an expression of our feelings, we will, as a body, attend his funeral, and will wear the usual badge of mourning on the occasion.

Resolved, That we tender to his bereaved wife and friends our heartfelt sympathies.

Resolved, That a copy of these resolutions be sent to the widow of the deceased.

ALFRED C. POST, M.D., *President.*

CHAS. M. ALLIN, M.D., *Secretary.*

DEATH OF VALENTINE MOTT, JR. M.D.—Died in New-Orleans on the 20th of September, of yellow fever, Dr. Valentine Mott, Jr. aged 33 years. The deceased was son of Prof. Mott of this city.

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ERRATA.

Page 18, lines 3, read tulàres for 'lulares'
" " " 4, read tule for 'lule'
Page 20, line 7, read *tuláres* for '*lulares*'
" 23, " 17, " " " "
Page 33, " 21, read inference for "influence"
Page 34, " 8, from bottom for "amply" read simply
Page 39, " 5, for "53" read 52
Page 179, " 8, from bottom for "assist" read arrest.
Page 309, under head of total mortality, for Aug. 26, for "827" read 832, and for the "total 8166" read 8171.
Page 341, line 3, for "melopoplasty" read metopoplasty.